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CLINICS.

Clinical Lectures.

ON DIPHTHERIA.

A CLINICAL LECTURE DELIVERED AT JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

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GENTLEMEN: It is important that you should acquire as definite ideas as possible of diphtheria; and I therefore invite your attention to that disease, concerning which opinions are by no means uniform, despite the unusual amount of attention bestowed upon it, for the past twenty or twenty-five years, in the lecture-room, in the study, and at the bedside. It is at the bedside, indeed, in my own estimation, that we can alone clearly distinguish diphtheria from croup, with which it is considered identical by the majority of practitioners. The term diphtheria is misleading, derived as it is from διφθέρα, *a skin*, *a slough*, and thus applicable to indicate all conditions attended with local manifestations of pseudo-membranes. Croup is a more objectionable term still, as it is applied to a variety of disorders differing in their pathology; but, as it has become too thoroughly incorporated into medical nomenclature to be abandoned, it should be confined to indicate a peculiar sthenic inflammatory affection of the air-passages—the upper air-passages especially—in which the main local manifestation is the development of false membrane upon the mucous surface of the larynx, and in which the main danger to life is the mechanical one due to accumulation of the false product to such an extent as to produce death by actual suffocation, or want of due oxygenation of the blood by prolonged impediment to respiration.

If the term croup be retained as synonymous with diphtheria, which it is not, and be applied to all affections of the air-passages attended with the production of false membrane, then, it appears to me, we are able to distinguish four varieties of croup. Firstly, *true croup*, *sthenic croup*, *idiopathic croup;* purely inflammatory in the usual acceptation of the term, sporadic, non-contagious, and manifested almost exclusively in

children. Secondly, *systemic croup, the croup of diphtheria*, a condition similar to the first variety, but engrafted upon diphtheria; a specific disease, endemic and even epidemic, though likewise sporadic; contagious; manifested in individuals at every stage of life; and accompanied by peculiar nervous and glandular manifestations which demonstrate its systemic character. Thirdly, *deuteropathic croup*, manifested in some cases of phthisis, syphilis, typhoid fever, and the exanthemata; and, fourthly, *traumatic croup*, due to the local action of boiling water, steam, ammonia, acids, vesicants, corrosive sublimate, mechanical injuries, foreign bodies, and so on.

In all these varieties the false membrane is diphtheritic in the sense of being adventitious; but its presence does not stamp the disease as diphtheria. Diphtheria may exist, indeed, aye, and be fatal too, without any detectable manifestation of false membrane during life or after death. So, therefore, as the idea of true croup is associated with the essential production of false membrane, or its equivalent in a less dense product, we shall be willing to speak of the croup of diphtheria when the presence of the croupous manifestation justifies the expression. Neither microscopically nor chemically can we detect any essential difference between the false membranes of croup and of diphtheria.

Diphtheria, gentlemen, in its typical form, is an adynamic, constitutional, disease, due to specific though not well ascertained causes, and attended with a local pathological manifestation in the form of exudative deposits upon the mucous membranes and upon abraded cutaneous surfaces. It is quite probable that the deposit always commences upon an abraded surface, even on the mucous membrane, because of the catarrhal condition of the nose, throat, and air-passages which precedes the local manifestation.

The mucous membranes especially susceptible to the local deposit are those of the uvula, palate, tonsils, and pharynx. Thence the deposit is liable to extend to the larynx, trachea, and bronchi; to the nasal passages and the interior of the ear; to the various sinuses in communication with the nasal passages; and to the œsophagus and stomach as may be. It is generally believed that certain minute vegetable organisms, emanating from water and air contaminated with refuse, gain direct access to the pharynx and air-passages in eating, drinking, and breathing; and locally poison the system. These organisms are very abundant during diphtheria, but they are quite abundant in every form of sore throat in which morbid products accumulate, and are even present in the healthiest state. Hence it is improbable that they are the sole cause of diphtheria, though diphtheria provides a favourable condition for their development. It is even believed by some pathologists that these minute organisms bore their way mechanically into the organs and bloodvessels and thus poison the system directly, as well as indirectly by decomposition. In the absence of direct demonstration to the contrary, we must be content to believe that the proximate cause of diphtheria has not been detected. The remote cause, or susceptibility of the disease, appears to reside in constitutional debility, or at least impaired vigour, for it is rarely that a robust individual is attacked unless enfeebled by overwork, anxiety, self-indulgence, or something else. Subjects of sore throat are especially liable to contract diphtheria, particularly if their mucous membranes be denuded of epithelium. Hence, perhaps, its liability at times to follow upon the sore throats of the exanthemata. It has long seemed to me impossible to account for the immunity of certain individuals under influences identical with those attending the development

of the disease in other inmates of the household, without acknowledging that there must be some special condition of system favourable to the development of diphtheria. A remarkable exemplification of this opinion has recently become historical in the outbreak of diphtheria, less than two years ago, in the family of the Grand Duke of Hesse Darmstadt, the son-in-law of Queen Victoria, in which not a single member of the numerous household retainers were attacked, although several members of the family succumbed. The grand-ducal family, likewise, are now known to have been subject to sore throat.

An incubating period usually intervenes between exposure to the infection of diphtheria and the manifestation of the disease. This period varies, as a rule, from two to five days, but it is by no means definite. Then the throat becomes sore under more or less febrile manifestation, and before many hours a deposit of some kind may be detected at some portion of its surface; and in the great majority of cases in which the air-passages proper are about to become involved, the deposit may be observed on the epiglottis or in the larynx within twenty-four or thirty-six hours. It must be borne in mind that I am describing the usual course of the disease, and that every case you see is likely to differ somewhat from every other case with which you may come in contact. The sore throat will be accompanied by swollen cervical and submaxillary glands, because the sore throat in diphtheria is parenchymatous, deep-seated, involving the submucous connective tissue; consequently the lymph-spaces which begin in the meshes of this tissue become implicated, and convey the irritation to the lymphatic ducts and glands with which the affected portion of the throat is in anatomical connection. One reason why these swollen glands are not observed in true croup, as the rule, is because they are not in anatomical connection with the larynx, and are thus unaffected until the pharynx or tonsils become involved.

The acute febrile phenomena sometimes subside as these local manifestations progress, and sometimes coalesce into fresh ones due to the systemic irritation produced by extension of the local product. This local product appears at first as a lymphous material on some portions of the uvula, palate, tonsils, or pharynx; frequently on one side only, sometimes on both. It is usually coagulated into small whitish or gray specks, more or less translucent and soft at first, but soon becoming opaque and tough. These specks increase into patches of irregular shape and distribution, occasionally amounting to extensive casts upon the surface. These products are the false membranes. They become darker in colour and in consistence; and after remaining *in situ* three, four, five, or more days, gradually exfoliate from periphery to centre, leaving the mucous membrane intact or merely hyperæmic. When forcibly removed, the mucous membrane may be bloody. Their disappearance may be followed and refollowed by successive reproduction of similar products.

Sometimes the false membrane compresses the capillary bloodvessels to such a degree as to obstruct the circulation; and sloughs occur at points nourished by these vessels. This is the gangrenous form of diphtheria, the cadaverous odour of which is sometimes characteristic.

The constitutional disturbance varies greatly, and is often an index to the prognosis. An elevation of temperature of from 4° to 7° F. indicates a probability that the deposit will invade the respiratory tract; and in some instances the extension and persistence of the deposit varies, proportionately, with the temperature. Wakefulness is frequent, and with

restlessness at night, often heralds delirium and convulsions in children. The pulse becomes accelerated to 120, 130, or 140 per minute, and usually without the customary proportionate increase in the number of respirations, as is the rule with sthenic diseases. Hence this point sometimes becomes a good bed-side reference in distinguishing true croup from diphtheria. Nor is the pulse apt to be firm and hard, as in simple inflammatory affections; but it is soft, puffy, even, and compressible. The appetite usually fails early in a well-developed case, and this may be succeeded by gastric and intestinal irritation, even amounting to vomiting and diarrhœa. The urine becomes scanty and of high specific gravity, often with various evidences of active renal disease. Albuminuria is frequent, and the quantity of albumen varies from time to time, sometimes amounting to from one to three drachms in the twenty-four hours. The amount of albumen is often indicative of the severity of the attack; and as albuminuria is an infrequent manifestation in true croup, its existence becomes an additional clinical distinction between the two affections when the larynx becomes implicated. Extension of the local lesion to the larynx is indicated by hoarseness, cough, and dyspnœa; the latter in part due to inflammatory swelling, and in part to paralysis of the dilator muscles of the larynx, as well as to the accumulation of the morbid product. Now, too, tumefaction may take place in the lymphatic glands below the hyoid bone, by extension of irritation in the lymphatic vessels in the epiglottis and upper portion of the larynx. The fever increases as the morbid process progresses; respiration becoming more frequent and difficult, and requiring the aid of the auxiliary muscles. Inefficient aëration of the blood becomes indicated by pallor of the face, lips, and nails, and coolness of the extremities; and if the dyspnœa increases, the soft tissues below the sternum, above it, and between the ribs, become deeply depressed at each inspiration, by the pressure of the external atmosphere. The voice and the cough are muffled. All the symptoms just described indicate the approach of asphyxia, unless relief is procured by the spontaneous or artificial discharge of the exudative products.

Symptoms of subsidence of the attack become manifested in favourable cases, at a period varying from the eighth to the fourteenth day, and convalescence commences, accordingly, during the second or third week.

In cases of profound blood-poisoning, the usual adynamic symptoms become superadded; and death from asthenia is apt to ensue in from two to four days after their onset, if the conditions cannot be combated. Ecchymoses, purpura, erythema, and irregular cutaneous eruptions are sometimes manifested in this condition. Should recovery take place, convalescence is rather slow, as a rule.

Recovery is rare in gangrenous cases, and may be followed by irreparable injury from actual losses of tissue and vicious cicatrizations.

It is thus evident that the prognosis is grave in diphtheria. It is impossible to predict safety, even in mild cases; while recovery may occasionally follow the most unpromising manifestations. The vigour of the patient, the character of the epidemic, the hygienic surroundings of the patient, and the efficiency of the nursing attendants, all have their influence. Complications with other diseases are unfavourable. During the first week the danger is from involvement of the larynx, and, this period passed, it then lies in the exhaustion of the system. High temperature, a rapid and feeble pulse, loss of desire to take nourishment, excessive albuminuria, great prostration, irregular eruption, local hemorrhage,—all are symptoms of unfavourable augury.

How, gentlemen, are we to manage our cases of diphtheria? This is the all-important question. We cannot cure it. It has certain stages of evolution through which it must pass, which no specific can arrest; and our duty is to guide the patient through them as safely as may be, and sustain him if we can. Some cases recover spontaneously, there is no doubt, but we can rarely trust to the unaided efforts of the system. The two main indications, in my estimation, are to keep up a supply of nourishment and stimulants, and to provide for the detachment and discharge of the morbid accumulations when they threaten to occlude the air-passages. Depleting measures, formerly recommended in croup, are no longer resorted to in diphtheria;—another clinical point, to my mind, strongly indicative of systemic difference between the two affections. We must bear in mind, as I have indicated, that there is an adynamic blood disease to be resisted, and a local product to be watched. Let us discuss these two points separately. The blood is the liquid flesh, so to speak, in which all recuperative power resides. The healthier the condition in which it can be maintained, the surer the prospect of recovery from the disease. Hence efforts should be made to regulate all contaminating influences that are within our control. We should provide for systematic disinfection of the sick-room in particular, and for disinfection of the whole house likewise. This can be done by the free use of sprays of carbolic acid, or of sulphurous acid. Solutions of sulphate of iron or some other disinfectant should be kept in all the vessels to be brought into the sick-room to receive the discharges, soiled clothing, refuse food, and slops of the patient. In this way we guard against additional contamination of the poisoned blood from the emanations and discharges of the patient himself. At the same time, too, and what is of the utmost importance prophylactically, the attendants of the patient and the remaining inmates of the household are protected in part from direct contagion, and from impairment of reserve vigour, which might render them particularly liable to that contagion.

As to the patient himself, assiduous cleansings of mouth, throat, and nasal passages, should they become fouled from retained secretions, with ample supplies of digestible food, and the administration of a tonic remedy, than which none, perhaps, is more serviceable than tincture of the chloride of iron, will be all that will be required anterior to the appearance of the local morbid product; unless there should be such indication of profound septicæmia or collapse, which would call for large doses of quinia, or alcoholic stimulation, respectively.

And right here, gentlemen, let me direct your attention to a significant clinical fact, the truth of which you can verify by your own studies and observation. It is this: Chlorine compounds, whether administered internally or applied topically, are more frequently efficacious in diphtheria than any other remedies. Read the records of writers and you will see extolled tincture of the chloride of iron, which I place for you in the first rank, chlorate of potassium, chloride of ammonium, chloride of mercury, chlorine mixture, hydrochloric and nitro-hydrochloric acids. Other remedies, similarly extolled, have this in common with the chlorides, that they have disinfectant properties. This adds to the list, sulphurous acid, sulphites and hyposulphites, carbolic acid, benzoate of sodium, and other drugs of similar qualities. But it is not my intention to enumerate the various modes of treatment lauded in diphtheria. The vaunted success in many instances has been due to the misapprehension that prevalence of

common membranous sore-throat was prevalence of diphtheria. It will suffice to fix your attention upon those remedies which in my judgment are most entitled to confidence. We return, then, to the tincture of the chloride of iron. It must be administered at frequent intervals and in large doses. The object is to make as profound a beneficial effect on the health of the blood as practicable. Hence, we give from five to twenty or even thirty drops, according to the age and vigour of the patient, *every second hour, hour, or half-hour.* It may be given in glycerin and water, or in diluted syrup of lemon, or in any pleasant way with which you may become acquainted. It is quite probable that the alcohol in this preparation has some beneficial influence, constitutionally: for, as will be stated to you presently, alcohol is of the utmost efficacy once the constitutional vigour begins to manifest rapid or steady deterioration. The frequent deglutition of this remedy, in addition, brings it in frequent contact with morbid products accumulating upon the deglutitious tract; and exerts a desirable physical impression upon those products, akin to that specially sought for, when, as I shall mention shortly, it is resorted to as one of our most trustworthy agents in topical medication.

Chlorate of potassium is extensively administered as a constitutional remedy in diphtheria; frequently in the form of *the chlorine mixture*, which is prepared with an equal number of grains of the chlorate and of drops of hydrochloric acid in plain or aromatic water, infusion of quassia and so on. The dose of the chlorate varies from two to fifteen grains according to the age of the patient, every third or second hour, or more or less frequently as may be. It is quite common to combine this remedy with the tincture of the chloride of iron, and in the same mixture. A better plan is to have the two drugs prepared separately and then combine the mixtures at the bedside, so that the quantity of one drug may be varied if required, without affecting the dose of the other. Let me caution you about an immoderate use of chlorate of potassium. Look out for evidence of renal irritation, and suspend its administration until such untoward symptoms subside. In view of the normal tendency to albuminuria and to renal disintegration in diphtheria, it is important that no abnormal load be laid upon the kidneys whose excretory offices are fully taxed as active participants in the elimination of the poison from the system. The local action of the chlorate of potassium on the mouth and throat, and its excretion through the salivary and pharyngeal mucous glands enhances its efficacy as an internal remedy in diphtheria. It may be given in lozenges or in compressed pills, and allowed to dissolve slowly in the mouth so as to prolong its contact with the diseased surfaces.

Quinia is a remedy much employed in the treatment of diphtheria; in part as a tonic, in part as an apyretic, in part as a neurotic, and in part as an antiseptic. As it is desirable to combine important remedies when practicable, to avoid too frequent dosing, and as chlorine compounds seem to be especially serviceable in diphtheria, in fact in affections of the respiratory organs generally, I prefer the hydrochlorate of quinia to the sulphate. It is fully as efficacious, incomparably more soluble, and can be manufactured at much less expense. It is given in decided doses until there is abundant evidence of constitutional impression. When deglutition is painful or difficult, it may be given by enema; with proper augmentation of the dose. Under similiar circumstances, it is better to persevere in giving the iron and potassium by the mouth, as their topical effect upon the throat is of certain significance.

Alcohol in the form of strong wine, or as brandy or rum, is of the utmost importance when the system begins to give way; and its free administration should not be delayed after the earliest manifestations of decided loss of vigour. At this stage it is of more importance for the time being than any other remedial agent. From half a drachm to an ounce of brandy or its equivalent, proportionate to the age of the patient, may be given at suitable intervals to keep up the effect, be the intervals three or four hours or but fifteen minutes. Indications for its continuance or suspension will be promptly afforded by the general condition of the patient. As long as it is well borne, it may be given to any extent appearing necessary, short of producing actual alcoholic intoxication, especially so when sufficient nourishment cannot be taken. Children readily take a sort of syrup of brandy made by burning it beneath a lump of sugar which becomes melted in the process.

Though other internal remedies are often valuable in diphtheria, especially under varying circumstances, I feel like stopping with the short list just commented on. It is proper, however, to mention a new treatment, highly lauded of late years in Teutonic Europe, but not sufficiently endorsed at present to justify unqualified approval. It consists in the administration of large doses of benzoate of sodium, the use of which is based on the opinion that it arrests the development of the diphtheritic cryptogamia. As considerable attention has been directed to this subject, which has not yet become incorporated into general professional literature, it may be well to mention the formulæ used by Letzerich the promulgator of the method. Five grammes of pure benzoate of sodium are dissolved in forty grammes each of distilled water and peppermint water, to which are added ten grammes of syrup of orange-peel. To infants less than one year of age, two teaspoonfuls of this mixture are given every hour; to older patients the mixture is given in tablespoonful doses, the amount of benzoate of sodium being increased from five to seven or eight grammes for children from one to three years of age; still further increased to from eight to ten grammes for children between three and seven years of age; still further increased to from ten to fifteen grammes for children above seven years of age; and increased to as much as from fifteen to twenty-five grammes for adults. In addition to this internal administration of the drug, the false membranes are dusted over with powdered benzoate of sodium, two or three times a day in mild cases, and every three hours in severe ones. The drug is also administered in gargles; a five per cent. solution being sufficient for older children. I have no experience with this treatment, nor any personal knowledge of it whatever.

I may add, too, a few words as to carbonate of ammonium, sometimes a remedy of great value at moments of sinking. From two to ten grains may be given in syrup of acacia, or other vehicle, to be repeated whenever indicated; and in case of difficulty of swallowing, it may be administered by the bowel in quadruple quantity. In cases of threatening accumulation of fibrin in the right heart, large doses are indicated theoretically on the basis of observations which have shown that its admixture with blood preserves the fluidity of the latter for some time. It is possible, too, that intravenous injections of the solution of ammonia may be resorted to with temporary, if not with permanent benefit at moments of collapse; but I have no data in illustration of the value of the inference.

What shall be done for the sore throat? what for the swollen and painful glands? Pellets of ice placed in the mouth, and renewed more or less

continuously, are as grateful and soothing a means of local relief as lies at our command. Iced compresses are used externally by some prominent practitioners; but they cannot always be employed with impunity; and their use should be discontinued if not promptly serviceable. It is often better to apply warm cotton-batting, spongio-piline, or an actual cataplasm. Inunctions with oil, lard, cosmoline, are often useful; care being taken to use nothing which might favour abrasion of the cuticle, lest local infection further complicate the disease. Great pain requires the use of morphia in effective doses by stomach, bowel, or skin, as may be most available. Prompt discharge of the morbid products as they accumulate has been indicated as an important object in the management of our case of diphtheria. How shall this be secured? Shall it be by removing them bodily whenever they are favourably located for detachment and withdrawal? To those who regard the local product and its extension as the more important feature of the disease, such a method seems highly desirable. If there be a circumscribed patch, undergoing spontaneous detachment, there can be no objection to its extraction. Indeed, its removal is indicated, as getting rid of effete material, the decomposing elements of which are being drawn into the lungs at every inspiratory movement; thus adding additional contamination to the blood.

It is quite possible, in favourable cases, to keep the morbid product diffluent by maintaining a warm and equable temperature in the sick-room, which should be well ventilated without exposing the patient to direct currents of air, and providing an excess of humidity of the atmosphere by hanging wet cloths around, or keeping up a moderate evolution of steam near the patient. The moister the products, the more readily they can be expectorated. When they remain dry and adherent, there is no objection, if fully within the reach of instruments, in making an attempt, by a thorough topical medication, to arrest their further progress, and thus remove the local source of danger; but should the first application fail in this object, no repetition should be made. The practice of cauterizing the uninvaded tissue is reprehensible, because the local product is likely to appear on abraded surfaces. Of all the local agents of which I have any bedside experience, the tincture of the chloride of iron has been by far the most efficacious. It should be applied with a swab of cotton or sponge, which is pressed with considerable firmness against the pseudo-membrane, so as to favour thorough contact. After the application, attempts should be made by gargle, spray-douche or syringe, to remove the deposit; but forcible removal is not judicious, unless it is already partially detached. Lime-water is the best solution to use in the douche or syringe. So much for the accumulations in the pharynx and nasal passages.

When the larynx becomes invaded, then the best plan I am familiar with is to keep up a constant evolution of steam passing over the face of the patient; and, in addition, to slake a few pieces of lime the size of the fist, by the bedside every hour or two, or whenever the respiration becomes obstructed; covering the vessel with a hood of stiff paper, so as to direct the steam and particles of lime towards the mouth of the patient. I do not subscribe to the opinion that the lime vapour is capable of dissolving the membranes *in situ;* but I believe that the particles of lime inhaled act mechanically, becoming insinuated beneath them at numerous points, and thus affording minute inlets for the watery vapour, which detach them, and facilitate their expectoration by cough.

The use of emetics is indicated in children, to provoke expectoration from the air-passages in the act of vomiting; but the same indication does not occur in adults who are able to expectorate voluntarily. If successful, the emetic may be repeated at intervals of six hours as long as the indications continue or recur. Alum, ipecac, and turpeth mineral are the most reliable agents, and may be tried in the order named; adhering to the alum if it prove efficient. Emesis should not be carried too far, or be repeated if ineffectual, as it exhausts the power of the system without any compensation in the discharge of morbid products.

Should asphyxia be threatened from accumulations in the larynx or trachea, tracheotomy is indicated; and, though most frequently unsuccessful in averting death, it facilitates due access of atmospheric air to the lungs, and often saves lives that would otherwise be lost.

The most careful attention is required after tracheotomy, to keep the artificial passage clear. The stimulating treatment and the lime inhalations should not be discontinued.

The two main indications for favourable prognosis after tracheotomy, are desire for food, and ability to expectorate. All treatment should be subservient to facilitating these great ends.

Paralytic sequelæ sometimes follow diphtheria. They are to be managed on general principles; and they usually subside without leaving permanent traces.

ON MENORRHAGIA.

A Clinical Lecture.

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GENTLEMEN: It is a matter of course that I shall go over this subject as we have seen it illustrated in "Martha," or as I see it illustrated in my own practice; and I say this, because, if you look into the books, you will see descriptions of menorrhagia as divided into two kinds—active and passive. I know nothing of this distinction. You will find also a distinction drawn according as the discharge is of menses or of blood; but I know nothing of this distinction. I know of menses, and I regard slight losses of blood from the interior of the womb as the same thing as menses in physical characters. Then, again, you will read in books accounts of symptoms. I know of no symptoms except such as are produced by loss of blood; that is to say, I know no special, still less any essential, symptoms of menorrhagia, as distinguished from any other loss of blood.

In all your studies, with a view to practice, I urge upon you the importance of attending to the theory of nomenclature, because a great deal of misleading arises from neglect of this. It is well known to be a common proceeding with inferior practitioners to treat a disease according to its name; but the dangerous influences of nomenclature spread wider than the narrow limit of bad practitioners. The best names given to diseases are, upon the whole, those that have no meaning, that imply nothing but a name; these are the least misleading. A common mode of naming a disease is, as in the example before us, from its chief symptom. Menorrhagia is, for many, a name for all cases where there is too copious a loss of blood at monthly times. But you have here an illustration how much or how little may be conveyed by a name, for a disease which is, in many cases, essentially a menorrhagia, is called hæmatocele; and if you are to have a

correct view of this great disease you must keep in mind that in a great number of cases it is a menorrhagia, as you have already learned from cases you have seen in "Martha."

Menorrhagia and metrorrhagia are, in the immense majority of cases, not truly names of diseases, but names of symptoms; and, in such cases, it is very important to keep this in mind, because it is upon this knowledge that your treatment is founded.

A very important part of this lecture I devote to what menorrhagia is not. Many of the things that it is not I shall merely mention; others I shall speak of at greater length.

When you are called to a case, all the diseases I shall name should be made to run through your mind; for, as I have already told you, if you do not think of the diseases, any of which a case may be, you are very unlikely to diagnosticate the case properly; so seldom is a direct mode of diagnosis available.

If a woman has menorrhagia or metrorrhagia, she may have a threatened abortion, or a threatened miscarriage, or a polypus. She may have a uterine fibroid, a uterine cancer, or merely a catarrh of the neck of the womb, or an abraded condition of the neck of the womb which may be confined to that part or spread beyond it. But there are more recondite conditions which you must also keep in mind when you are diagnosing a case in which there is menorrhagia or metrorrhagia.

One of these is endometritis, of which loss of blood is a symptom, sometimes called pseudo-menstruation. A case, probably of this kind, where the discharge lasted fourteen years, a few days ago ran away from "Martha," being forced to do so to look after her husband. That case was probably one of fungous or hemorrhagic endometritis; but the diagnosis was not completed. In many cases, as you have often seen illustrated, perimetritis and parametritis induce pseudo-menstruation, probably by producing congestion, if not inflammation, of the mucous membrane of the cavity of the body of the uterus. This spreading of irritation to neighbouring organs is not confined to the uterus, for you frequently observe it in the case of the bladder. The bladder may be distorted into any shape, squeezed up into any corner, without any vesical symptoms being produced; but in cases of parametritis and perimetritis it is a very common occurrence to have irritable bladder; the irritation being communicated to the slightly displaced and confined organ from the neighbouring inflammation. Ovaritis, of which you have seen many cases in "Martha," is very often accompanied by prolonged menstruation; and in most cases tenderness of the cavity of the body of the uterus indicates that there is a degree of endometritis accompanying the ovaritis. Vaginitis of certain kinds, as I pointed out in a recent lecture, is not a rare cause of loss of blood; and other morbid conditions of the vagina produce what passes as menorrhagia. A rare case of this kind is well worth mentioning. I was called in, not long ago, to a young lady about twenty-five years of age, who was with very great difficulty induced to seek advice for what she herself and her physician regarded as a very insignificant menorrhagia. She was never well. Ordinary remedies having completely failed, she very properly submitted to a vaginal examination, and on the middle of the posterior wall of the vagina there was detected a small growth, soft and about the size of a split tea. It was not tender, but it had a suspicious feeling which I find it impossible to describe. As soon as it was ascertained that it was growing I destroyed it by a strong caustic. At that time there was no disease discoverable but this little tumour; but within three months the patient was dead from a cancer of the whole of the lower part of the pelvis, which began in the way I have mentioned.

A very important source of deception I must now mention and impress upon

you, because it is not generally known. Bleeding often takes place from surfaces which are merely tender—which can scarcely be called diseased. These are found around the orifice of the urethra and that of the vagina. In one sense, cases of this kind—and they occur both in young and old—are very trivial; but, if you consider the anxiety of mind and annoyance caused by such loss of blood, you will see that it is important; and, for the success of a practitioner, such cases may be critical. I can best illustrate this by cases. A young sterile married lady consulted me for what she called menorrhagia, which never came on while she was at rest, but only when she walked. She had confined herself to the sofa to restrain it. When she consulted me I could find nothing the matter with her. At my wits' end, I insisted upon her walking and coming to me while the bleeding was going on. It was then, for the first time, that I made quite sure that she did bleed, and I found the bleeding slight in amount, and coming from around the orifice of the urethra. Now, this kind of loss of blood is still more alarming in an old woman, for reasons you well know, and I have in several such cases been able to set a patient's mind at rest by seeing the blood running from tender spots around the urethral or vaginal orifices. This is not new to you, for I have pointed out to you examples in "Martha," in which, when those parts were visually examined, there was a little bleeding from the mucous membrane of the orifice of the vagina. In some this results from walking, in others from no discoverable cause. In all it has been cured by mild astringent lotions to harden the parts. Another source will occur to you in newly married women. The husband will come to you, saying that his wife is menstruating profusely, and you find that this arises from lacerative injury due to sexual connection. Varicose veins in the vulva are not very rare in women who have had large families, and sometimes they occur even in sterile women. They may burst or be opened by injury, and the bleeding from them is sometimes fatal.

Now, all these conditions that I have gone over are very naturally confused with menorrhagia and metrorrhagia until a careful diagnosis is made; and sometimes this careful diagnosis is never made, and the case is mismanaged, or, if well managed, it is a matter of mere good luck, not of intelligent skill.

Before going further I must tell you the distinction of menorrhagia from metrorrhagia; or, rather, I must tell you the want of distinction, for that is as important as the positive side of the matter. A case is one of menorrhagia, and this includes an important class of diseases, when there is nothing to account for the excessive loss of blood, and when there is every reason to presume that the bleeding is menstrual—that is, from the interior of the body of the uterus, at the usual monthly times, and with the usual menstrual symptoms. If you have all these conditions combined, the case is then justly named menorrhagia. When you have absence of indications that the bleeding accompanies ovulation, then you call it metrorrhagia; but the distinction is not really of great importance. In no case is the distinction scientifically sure, but in many it is, for practical purposes, sure enough, and when it is made out it helps you to be an intelligent practitioner in any particular case.

Suppose, then, that you have a case of this kind before you—one that is not to be passed over by writing a prescription and talking to the patient, as very many are—you must then inquire into the following particulars carefully and minutely. First, as to the quantity lost. With regard to this every individual is, to a great extent, a rule for herself. What in one woman would be menorrhagia would in another be classed as amenorrhœa; so great are the variations within the limits of health in different women. Indeed, it would be difficult to say that there is any certain limit as to greatness of quantity except that of influencing the general health. I have seen many cases described as alarming menorrhagia in which it was only necessary to inspect what came away in order

to make them appear ridiculous. You must not treat a case for long without seeing the discharge for yourself to judge its amount. A common way of measuring the quantity is by the number of cloths a woman requires during twenty-four hours. Second, the presence of clots and the size of the clots must be inquired into. Third, the time during which the flow goes on is important, for you can easily see that length of time may make a common menstruation of the utmost importance. Within moderate limits, in respect of time every individual is a law to herself. Fourth, you inquire into the quality of the discharge, not only as to the presence of clots, but as to whether it is decayed blood or not, bright red, or chocolate-coloured, or like coffee-grounds. With regard to this brown blood, you must remember that a very small clot will, by gradually dissolving, stain for a long time the mucous discharges from a patient, and may deceive her into thinking that she is continually losing blood, whereas the whole matter, intelligently regarded, may be quite insignificant. Then, fifth, you must inquire into the interval or time of recurrence. And, such is the extreme anxiety—the injudicious over-care of themselves, manifested by many women, and by many mothers—that you will often be consulted about cases called, or held to be, menorrhagia, where the recurrence is only a few hours or a day or two before the time regarded as proper; and I must ask you not to yield yourselves as abettors of any such nonsense, while at the same time you do not fail to be kind and considerate of the feelings of your patients. Such a variation is not a morbid condition, and is not to be treated by drugs. But if the recurrence is greatly in advance of the usual and proper time, then you may have to consider the whole circumstances of the case with a view to its proper management or treatment. Lastly, a most important particular is whether the loss is injuriously affecting the woman's health; it may do this without producing evident anæmia; if it does also produce anæmia, there is no need of further proof that it is producing constitutional mischief.

When you are considering the pathology of a simple menorrhagia or metrorrhagia, what points are you to study? You think of congestion of the uterus or of increase of the blood-pressure; and you may be sure that whatever part is weakest under the influence of blood-pressure will be the first to yield. In most people, especially in youth, the Schneiderian membrane is the weakest part, and yields. In old people this yielding of the Schneiderian membrane, and consequent epistaxis, is often an extremely fortunate occurrence, saving them from the disastrous effects which are sure to follow the occasionally alternative yielding of some atheromatous vessel in the brain. Many cases of menorrhagia and metrorrhagia at all periods of life are no doubt analogous. Congestion of the uterus occurs periodically, as you know, in the menstrual periods of women; it occurs occasionally in the old, and also in the very young. The spurious menstruation of infants almost certainly depends upon a uterine congestion, very like that which occurs in adult women—a curious pathological condition which has its analogue in the congestion, secretion of milk, and sometimes even abscess in the mammæ, of infants.

Then you think of relaxation of the uterus. On examining women who are menstruating, the uterus is found to be bulky, soft, and its os somewhat more open than usual; and this condition may proceed to an exaggerated degree in menorrhagia and metrorrhagia; indeed, in some cases there is, even in the virgin uterus, a dilatation of the whole uterus much beyond its natural dimensions, and the formation of a soft clot in its inside. This dilatation occurs more frequently in women who have had children than in those who have not; but its occurrence, even in virgins, has been verified post mortem, and in such cases the presence of the clot in the uterus, if it is at all long retained, becomes a source of irritation, and leads to persistence of the bleeding.

Next, you must think of the state of the blood; and this important subject I must dismiss in a few words. When a woman is chlorotic she fortunately has generally amenorrhœa; but if not, she will be very liable to have menorrhagia. And you have here an illustration of a vicious pathological circle. The menorrhagia increases the chlorosis, and, *vice versâ*, the chlorosis aggravates the menorrhagia.

Lastly, the condition of the bleeding surface must not be neglected; and it is almost certainly very different in the young from what it is in the old. In the former you have probably a very much healthier tissue-condition than in the latter. In both, no doubt, you have the bleeding surface in a state of partial denudation; and in the old you probably have other senile conditions added to the state of superficial denudation which occurs in all menstruating women. In fatal cases the mucous membrane of the cavity of the body of the uterus has been found sometimes partially separated, and it has also been found to contain small disseminated ecchymoses.

Now for an enumeration of the varieties of true menorrhagia.

In the very young you are liable to have it with the first appearance of the menses. I have seen a young woman, who ever afterwards menstruated naturally, at the point of death from excessive hemorrhage at her first menstruation. In some fatal cases there has been noticed a condition of scorbutus or of hæmophilia.

In the newly married you find a common menorrhagia arising from the recent marriage. The woman supposes herself to be pregnant, passes her usual time a period of weeks or even months, and then has a profuse menorrhagia, which she takes for a miscarriage; and you must be on your guard against the peculiar pride of sterile women, who boast of this as a miscarriage, in order, apparently, to save themselves from what they consider the discredit of absolute sterility. Unless ovuline structures have been seen in the discharges, the evidence of miscarriage is deficient.

In mature, healthy women, menorrhagia is very rare, except as the result of some constitutional affection—the commonest causes being excessive childbearing and suckling, both of which probably act by producing a watery condition of the blood, which flows freely from an ill-contracted uterus. It is at this time of life chiefly that you see illustrations of general constitutional affections producing menorrhagia. Obstructive diseases of the heart, of the lungs, of the liver, as they are liable to lead to other hemorrhages, may naturally be expected to lead to menorrhagia or metrorrhagia. I am bound to say, however, that in practice I have not been able thoroughly to satisfy myself of this influence, except in the case of the liver.

A pregnant woman may have a menorrhagia. This I merely mention. It occurs mostly, if not exclusively, in the first months, and may recur for two or three months. Then, in women recently delivered, but who have passed the six weeks of the puerperal state, menorrhagia occurs not rarely, and sometimes very severely.

In elderly women it is common about the period of the change of life, and it may occur even after the change of life. I have seen some cases in which I could not doubt that sexual excitement was the cause of the loss of blood in women long past fifty-four, which you are told is the limit of childbearing. I dissected not long ago an old lady who had occasional metrorrhagia, and who believed herself to be still sexually young. The body of the uterus was large, like that of a young woman, while the cervix was atrophied; and the ovaries contained structures which were, so far as the naked eye could judge, like large menstrual corpora lutea.

The treatment of this affection is easily described and remembered, because

it can all be put under satisfactory theoretical rules. It is not treatment by specifics or remedies which have an unaccountable influence.

Constitutional remedies I shall not mention; everybody understands them. According to the constitutional disease, according to the state of the blood, so do you prescribe your remedies; so, also, whether the disease be in the heart, lungs, or liver.

In all cases where the loss is great you enjoin rest, but only in such. You can easily understand that exercise, stimulating the circulation, will tend to increase the flow. The rest you prescribe must be horizontal; and the patient must not, in extreme cases, get up even for purposes of urination and defecation, for the blood-pressure is greatly and injuriously increased by stooping and pressing down in performing these functions.

Then we come to medicines. Of all with which I am familiar—and I have tried a great number—ergot stands first. In obstetrics you are generally told that ergot produces its effect in about fifteen minutes: that is doubtful even in parturition; but in the unimpregnated woman you must not expect it to act thoroughly till days of its use have elapsed, and in some cases I have observed its use has had no result until it has been continued for weeks without intermission. After ergot, in popular estimation, come gallic and tannic acids. I am not quite sure that they have any effect at all. They may have an effect, and be as rationally used as other medicines. I have used them extensively, and the impression they have left on my mind I have just told you. The medicine which seems to me next best after ergot of rye is sulphuric acid, often combined with some saline; and no injury is done if the saline produce slight relaxation of the bowels. You have not long to wait for sulphuric acid to produce its effect. You may have to give it in large doses, and frequently; for instance, you may give one drachm, or even twice as much, in a day, dividing it into frequent doses. The beneficial influence of digitalis and cannabis indica is almost certain, yet in point of reliability these remedies come considerably after ergot and sulphuric acid.

One of the most powerful influences, and one with which I have been long familiar, is the use of heat. Heat is supposed by most people, professional and non-professional, to favour bleeding; but its influence in causing the contraction of involuntary muscles has long been known, and its use in cases of menorrhagia and metrorrhagia, whether simple or not, is very valuable. It is to be applied internally in the form of irrigation, by the passing through the vagina of a large quantity—pints—of water at 100° to 110° Fahr. This is not to be done long at a time, being continued five to ten minutes, and repeated several times a day. It is almost universal to swear by cold as a hæmostatic in our diseases, and I need not say that I have seen it used, and used it myself many times. In the form of ice, applied to the external parts, it is, I think, quite as often injurious as not. It is best used by irrigating the vagina just as is done with hot water, or by placing small bits of ice in the vagina. Even used in this latter way, my impression is that its value is inferior to that of heat.

If all these means fail, you may have to resort to a plug. In the virgin this is very difficult to insert. The operation indeed may be quite impracticable. But if the woman be married, and still more if she has had a child, it is easily made available, and you will often be astonished at the good result of even what seems to be a very imperfect plug. You will sometimes find a small sponge capable of controlling quite a formidable menorrhagia.

I have told you that there are cases of simple menorrhagia even in young virgins that prove fatal; and you are not to suppose that we have nothing to do for them beyond what I have already mentioned. The last remedy is to paint the bleeding surface with "styptic." If the womb is dilated the bleeding sur-

face may be easily reached. If the os uteri be not dilated, you can pass such an instrument as this hollow probe and inject the styptic through it, which will have the same effect as painting. The instrument you see is fitted to a small syringe.

Many of you will remember a fatal case of this injection with perchloride of iron, and therefore I hesitate to recommend that drug, although I think it is the most powerful styptic we have. I would advise you to use tincture of iodine; or, if you do use perchloride of iron, it should not be by injection. The bleeding surface may be swabbed with it, so that it may not pass into the veins, which was the disastrous accident in the case referred to. You may also try other drugs, such as a solution of alum.—*Med. Times and Gazette*, Aug. 7, 1880.

Hospital Notes.

Locomotor Ataxy in a Boy.

Harry G., paper boy, aged 13, was admitted to the Sussex County Hospital under the care of Dr. W. Ainslie Hollis, on Nov. 21st, 1879. His mother was alive and healthy. His father had recently died of cardiac dropsy. The patient was the second of six children; five were living; four healthy; one girl died in infancy. There was no history of chorea, epilepsy, or mental disorder amongst his relations.

The patient, an intelligent lad, had had no illness sufficiently severe to keep him in bed, except measles and scarlet fever in childhood. He was stated to have suffered from frequent attacks of diarrhœa, passing blood in his motions. Until nine years of age, he was quite firm upon his legs. About this time, his mother first noticed a weakness in the legs and something "strange" in his appearance, as though he had had "something to drink." There was no personal history of fits, chorea, or of any mental disorder.

On admission, the boy was poorly nourished. He could not stand upright with his heels together and his eyes closed. There was always considerable swaying of the body (static ataxy) when standing unsupported. The head was held stiffly. In walking, the legs were widely separated, and the feet flapped the ground at each step. He frequently fell down, apparently from weakness of the legs, sometimes from giddiness, but he never lost consciousness. Cutaneous sensibility of the legs—tested by pricking, pinching, and the application of warm and cold sponges—was not observably impaired. There was no sensation of walking upon air-balls, etc. Patellar tendon-reflex was absent. (This reflex was only impaired about a fortnight before his admission.) There was some reflex action on tickling the soles of the feet. Muscular sensibility, as tested by the continuous current, was fairly good. The muscles responded to the action of the current, and he perceived their contraction. Muscular power was good. He complained of occasional lancinating pains along the course of the anterior crural nerves. He could not pick anything off the floor without kneeling. The upper limbs appeared to be healthy. He could write a good round hand. He readily touched the tip of his nose with either hand whilst his eyes were closed. The eyesight was normal in strength, as tested by Snellen's types. No amblyopia nor diplopia was observable. The pupils contracted naturally. There was no ataxic movement of the eyeballs upon attempting to follow a moving object with his eyes. At one period of his disease (January, 1880), he suffered for some days from a pain in the left side of his head, followed by a discharge from the left ear. He frequently suffered from giddiness. There was no deafness. He spoke slowly and somewhat indistinctly. His general health was fairly good. There was no loss of control over the sphincters.

During his stay in the hospital, he was treated with iron and strychnia, cod-liver oil, and the continuous current; no perceptible improvement resulted.

REMARKS.—The above case presents several peculiarities worth consideration. First, as regards the age of the patient; among sixty-eight observations, Erb found only three to have commenced between eleven and twenty years of age. The statistics of Carré, Topinard, Cyon, and others, correspond closely with these. Friedreich has certainly noted a peculiar variety of this disorder, which is seemingly hereditary, and begins very early in life. Dr. Bradbury (*British Medical Journal*, 1871, vol. ii. page 499) narrates a case which, in many respects, resembles the foregoing. The patient, however, was eighteen years of age when he came under observation, with well-marked symptoms of ataxy. In this case, an hereditary tendency was probable; so far, it resembles the three cases mentioned by Friedreich, aged respectively fifteen, sixteen, and eighteen (Virchow's *Archiv für Pathol. Anat.*, vols. 26 and 27, 1863). In the *British Medical Journal* (June 4th, 1870), a case of locomotor ataxy, in a man aged twenty-four, is shortly recorded. The disease is stated to have commenced at the age of nine. Dr. Ryott (*Lancet*, August 12th, 1876) also sends notes of a case of this disorder in a patient aged nineteen. The above cases are all that I have been enabled to meet with. Many of them are, from the scantiness of the descriptions, valueless for the purpose of comparison. I think, however, they sufficiently show the rarity of the disease at the age of the boy G., especially if we exclude all hereditary taint.

As regards the origin of the disorder in this case, it will be difficult to ascribe it to any other cause than that of "taking cold." G.'s occupation as a newsboy doubtless gives this conjecture (for want of a better one) an aspect of probability.

Another peculiarity in the case is the rapidity with which the symptoms increased in severity during the last six months. Friedreich lays considerable stress upon the long duration of the disease in the young affected by the hereditary form, lasting as it did in some instances for upwards of thirty years. Kellogg (quoted by Erb) also gives some similar cases of long duration. On the other hand, the absence of severe lancinating pains in the affected limbs (although G. suffered from these pains occasionally, they were by no means a prominent symptom) coincides with Friedreich's observations. In Bradbury's case also the pains were slight.

The co-ordinatory disturbance of speech, the absence of any disturbance of sensibility, or only insignificant ones, are also mentioned by Friedreich as peculiarities in his cases—peculiarities well-marked in the present instance. The rapid development of the ataxic phenomena in the muscles of the eyeballs and the upper extremities, in the latter writer's and in Bradbury's cases, are singularly at variance with the course the disease has taken in the boy G. I think the above case strengthens the hypothesis lately advanced by Tschirjew, namely, that tendon-reflexes (producible in any muscle favourably situated) are due to relations existing between the muscles and the spinal cord. According to this authority, every muscle possesses not only centrifugal motor nerves, but also centripetal nerves, having their origin near the junction of the muscle to its tendon, and passing into the spinal cord through its posterior roots. This nervous arrangement serves the purpose of keeping a constant tension upon the tendons, which tension in its turn reacts as a stimulus to the muscles to preserve their tonicity. When we put into action any group of muscles, the tone of their antagonists commences at once to increase, owing to augmented tension of their tendons. If this muscular nervous system be deranged (as by disease of the spinal cord), the corrective action of the antagonistic muscles becomes lost, and the movements become jerky and uncertain. (*See London Medical Record*, 1880, page 82.)—*British Med. Journal*, July 31, 1880.

MONTHLY ABSTRACT.

Anatomy and Physiology.

Multiplicity of the Spinal Glangia.

The ganglia upon the posterior roots of the spinal nerves are invariably described as single. A subject has been met with by Dr. Leo Davida, of Pesth, in which some of the lumbar ganglia were double instead of single. This observation led him to investigate the condition further, and he has found a similar condition in two other bodies. In some of these the ganglia were treble instead of single. In the first body, that of a man twenty-three years of age, the first, second, third, and fourth lumbar ganglia were double on the left side, but on the right only the third and fourth. In most the ganglia were quite separate, in some they were connected by a gray commissure. The largest was three millimetres in diameter. The posterior root, two millimetres above the ganglion, divided into two, one for each ganglion. There was a difference in the size of the roots corresponding to the size of the ganglia. In the second body, that of a man forty-five years old, on the left side the first four lumbar ganglia were double, and the fifth was treble. On the right side the first two were double and the last three treble; one of the sacral ganglia was also double. In some instances the three ganglia were quite separate, in others they were united by gray commissures. In the third body, that of a man thirty-two years of age, the third, fourth, and fifth lumbar ganglia were double on the left side, the second, third, fourth, and fifth on the right. As these were the only bodies examined, and the condition was found in all, the conclusion was drawn that duplicity of some of these ganglia is the normal condition. The point certainly deserves the attention of anatomists.—*Lancet*, Aug. 14, 1880.

The Formation of Callus.

The mode of formation of callus is a subject of both practical and pathological interest. In the year 1865, M. Ranvier showed that the callus which is formed in simple fractures, in men, and animals alike, passes through a cartilaginous stage, while in compound fractures there is no cartilaginous stage; new bone is at once formed from granulations which come from the medulla of the fractured bone. He showed also that suppurative inflammation does not interfere with the formation of bone in cartilaginous callus, when the latter has once been formed. These researches left still undecided the question of the cause of the difference in the process under the two conditions. This point has been further studied in an investigation described to the Académie des Sciences by two pupils of M. Ranvier, MM. Rigal and Vignal. They find that (1) even in simple fractures the central plug always becomes directly bony in the middle of the medulla, which has assumed an embryonal structure. (2) When a part of the bone is scraped away, either down to the medullary canal or less deeply, the cicatrix is always directly bony, even when union is by the first intention, a fact also observed by M. Ranvier. (3) In a compound fracture, even if the fragments of bone are left exposed to the air for a considerable time, if suppurative inflammation can be avoided, and union by the first intention thus obtained, the callus passes through a cartilaginous stage. (4) That in a compound and suppurating fracture the callus is

at first cartilaginous, in the points not invaded by the suppuration, while even in simple fractures, in which the extremities of the bones are, from any cause, bathed in pus, the callus is still primarily bony. These different facts led the investigators to conclude that if in compound fractures the callus is primarily bony, it is because the periosteum, or more exactly the subperiosteal layer of cellular tissue, was destroyed by the suppuration; and they have arrived at the conclusion that this layer alone is concerned in the formation of cartilage, and that the medulla of both the Haversian canals and of the central canal forms bone directly. Several attempts were made to obtain bony tissue from medulla transplanted into the subcutaneous cellular tissue, but all failed, while subperiosteal tissue thus transplanted invariably produced bone which was at first cartilaginous, as M. Ollier had already found. From the lower third of the tibia of a rabbit the periosteum was removed three or four times, so as to destroy all its osteogenic properties. Then, fifteen days after the last removal, the bone was broken in the middle of the denuded portion. Twelve days later, a period at which, in the rabbit, a cartilaginous callus is usually found, the animal was killed, and the examination of the fracture showed that in the midst of granulations proceeding from enlarged Haversian canals, there was a peripheral callus, purely bony. The experiment was repeated several times with the same result. A still more conclusive experiment was the one in which the periosteum was removed from one surface only, and the bone then broken. Upon that surface the osseous callus formed directly, as in the case of compound fractures, while upon the surface on which the peritoneum was preserved the callus was cartilaginous. These experiments show that the subperiosteal layer, when there is active irritation, as in the case of fractures, contributes to reparation by forming cartilage. But there are numerous cases in which the subperiosteal tissue forms bone directly, and experimentally it could be made to form bone or cartilage as well; with slight irritation bone is formed, with greater irritation cartilage. In the same animal the periosteum was exposed on both legs; on one it was irritated gently by rubbing (as with an agate burnisher), and in the other leg it was irritated strongly, and the adjacent soft parts were bruised, so as to cause an extravasation. If union of the wounds by first intention was obtained, in the former osteophytes were found beneath the periosteum on the twelfth day, while in the latter there were only cartilaginous masses. The latter experiment explains the direct formation of bone at the points of the callus which are farthest from the fracture. In the experimental fractures it was invariably found that in the extremities of the oval mass of callus, bone was formed at once—the inflammation at these points being less active, the subperiosteal cellular layer formed bone immediately.—*Lancet*, Aug. 28, 1880.

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The Constitution and Relations of Bone Lamellæ, Lacunæ, and Canaliculi, and some effects of Trypsin Digestion on Bone.

This is the title of a study recently made by Mr. De B. Birch, Demonstrator of Physiology in the University of Edinburgh (*Journal of Physiology*, vol. ii., Nos. 5 and 6), of which the following are the conclusions:—

1. A lamella of bone consists of a number of bundles of fibrils arranged in the same plane and in the main parallel to each other, but communicating occasionally by lateral offshoots.

2. Neighbouring lamellæ have the direction of the fibrils set at different angles, and the fibres of alternate lamellæ correspond to each other in direction very closely.

3. There are no elastic fibres in the lamellæ of the Haversian systems.

4. There is a membrane around the lacunæ and canaliculi, isolable throughout

its connections, and especially after treatment with chromic acid and digestion by trypsin.

5. The canaliculi are contiguous with a membrane lining the Haversian canal, this being homogeneous in structure, and of the same nature as the membrane of the lacunæ and canaliculi.

6. These membranes differ in nature from the cementing substance, as evidenced by the above-mentioned reactions, and are not mere condensations of that substance, as their outlines are sharply defined, and perfectly even when isolated by the process mentioned.

7. Periods of cessation in the deposition of Haversian systems of considerable duration probably occur, be the cessation throughout the length of the system or partial, and a membrane is formed at such periods around the temporary lumen similar to that which is afterwards formed round the permanent canal.

8. In consideration of the behaviour of tryptic digestion in producing the appearance described as occurring in the ox's rib, the older intermediate lamellæ are less resistant than the younger ones, and than the Haversian systems and masses of inner lamellæ, some change having taken place in the cement.

Materia Medica and Therapeutics.

Oil of Eucalyptus.

In the *Deutsche Medicinische Wochenschrift*, No. 30, Dr. SIEGEN, of Deutz, narrates some of the results he has obtained from the use of the oil of eucalyptus globulus in antiseptic surgery. He was induced to experiment with it at the suggestion of Professor Binz, and since 1872 has carried on his investigations of its antiseptic properties. He prepares the solution of the oil by dissolving three grammes in fifteen grammes of alcohol, and diluting with 150 grammes of water. In this solution he soaks ordinary gauze. This dressing is applied in the wet state, covered with the usual gutta-percha tissue, and the whole kept in position by means of gauze bandages. Thus prepared, the eucalyptus gauze does not appear to irritate or produce eczema upon even sensitive skin, and is perfectly antiseptic.

In one case of a child with caseous glands of the neck Dr. Siegen operated—first dipping the instrument in a 2 per cent. solution of the oil and washing the surfaces with the same—by scooping out the contents, draining, and applying a wet eucalyptus dressing, as above described. Although the spray was not used in this case, the discharges which had penetrated the gauze were quite sweet upon the third day. The slight amount of pus remained colourless, and on the eighth day the cavities had contracted and healed. In a second case, of a child with right genu valgum, he removed a wedge-shaped portion of the tibia, and, after fracture of the fibula and proper adjustment of the bone, dressed with eucalyptus gauze, using the thymol spray. The bone wound healed forthwith, and on the tenth day after the operation only a superficial strip of granulations remained.

In a child with purulent inflammation of the elbow-joint and fistulous openings, Dr. Siegen performed resection of the joint under the thymol spray, and, after washing out the wound with an 8 per cent. solution of chloride of zinc, dressed with thymol. The discharges from the wound remained, however, still offensive and profuse, whereupon he changed to eucalyptus dressings, having in the first place washed the surfaces with a 1 per cent. solution of permanganate of potash. After the first dressing the secretion of offensive pus ceased, and the wound rapidly healed.

His fourth case reported was an abscess of the knee, which was similarly treated, and with equally favourable results.

Dr. Siegen's experience has taught him that a 5 per cent. solution of oil of eucalyptus may be employed without any drawbacks. Dressings prepared with this solution may be left undisturbed for four or five days, whilst the 2 per cent. solution dressings remain aseptic for three days.

Dr. Siegen's researches confirm those of Schulz, published in the *Centralblatt f. Chirurgie*, 1880, No. 4, on the use of oil of eucalyptus in antiseptic surgery.—*Lancet*, Sept. 4, 1880.

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Action of Sugar on Calomel.

From time to time notes have appeared in various journals, warning against the changes said to be produced in calomel by sugar and various other substances with which it is often prescribed; while many therapeutists advise that so long as calomel is being taken, no salted food or acid drink should be allowed. M. VERNE has submitted these views to the test of experiment; he made various mixtures of calomel with common salt (in solution), beet-root and colonial sugar, solution of citric acid, etc.; these he examined at the end of periods varying from 3–15 days. Although at the end of these intervals the mixtures he experimented with showed to the eye slight traces of change, chemically he could find no evidence of the presence of corrosive sublimate, or of any soluble salt of mercury. He refers such accidents as have been reported chiefly to impurities in the drug; as supplied to the chemist, calomel is usually, to some extent, impure, and should always be washed with distilled water and alcohol. The danger of giving acid drinks with calomel is purely theoretical; it was proved that the latter, when exposed for fifteen days to the action of a 20 per cent. solution of citric acid, underwent not the slightest alteration. M. Verne concludes that the subchloride of mercury is a much more stable salt than is generally supposed; it is, in fact, more stable than corrosive sublimate, as solutions of the latter, when exposed to light and the influence of various organic substances, deposit calomel. Non-coagulated albumen, however, at the temperature of the human body, reduced calomel rapidly and easily, transforming it into a slightly soluble albuminate. Neither common salt nor sea salt, at 40° C., had any action on calomel, either when used alone or in the presence of albumen.—*Glasgow Med. Journal*, May, 1880, from *Bull. Gén. de Thérap.*, March 30, 1880.

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On Some Important Therapeutic Effects of Chlorate of Potassium.

Dr. ALEXANDER HARKIN states (*Dublin Journal of Medical Science*, May, 1880), that this drug exercises a most potent influence on all maladies dependent on defective nutrition, secretion, excretion, aëration, and molecular metamorphosis—that it possesses the power of developing vital force in weakened constitutions, of retarding the degeneration of the tissues, and of frequently controlling the too rapid advance of senility due to climacteric conditions. He considers the *modus operandi* to be due to the fact of its two elements being oxygen and potassium, which are indispensable to the formation of healthy blood. When a solution of chlorate of potash is taken into the stomach, a portion—as is the rule with iodide and nitrate of potash—is carried off by the kidneys, another portion passes by diffusion into the liquor sanguinis, the textures, the blood globules, and white corpuscles, a third may be supposed to part with these equivalents of oxygen in the blood, leaving behind chloride of potassium, which may be detected in the urine as well as in the blood, of which it is an important element. The dose should be a saturated solution, which is one ounce to twenty ounces of water,

the patient taking one ounce of this thrice daily. Its efficacy is increased in chlorotic or hemorrhagic conditions by the addition of tinct. ferri perchloridi. As to the tolerance of the drug, only one well-marked instance was noted where it produced strangury.

As a lotion, Dr. Harkin has found the chlorate of great value, and when using it externally he always gives it internally; in burns and scalds he has found it specially useful, as also in indolent ulcers, in sinuses in the breast in strumous abscesses, etc.

The above paper was read at a meeting of the Ulster Medical Society, and a discussion took place, at which Dr. Withers mentioned a case in which a large indolent sore had healed under chlorate of potash solution, grs. v to the ℥j of water, after everything else had failed. Dr. Browne had found it most efficacious in burns and scalds, and also in mammary sinuses, which were injected according to Dr. Harkin's directions.

Dr. Whitlaw had used the chlorate largely, and did not think that we could get on without it in children's diseases. In tonsillitis and pharyngitis he had found it of service, but he would caution those employing it to stop it after the urgent symptoms had disappeared, as he had found the congestion of the throat kept up by continuing the medicine.—*Glasgow Medical Journal*, Sept. 1880.

Medicine.

The Thermometer in Diagnosis.

Dr. J. B. Bradbury, Physician to Addenbrooke's Hospital, Cambridge, in his recent Address in Medicine before the British Medical Association (*British Med. Journal*, Aug. 14, 1880), made the following interesting remarks on the diagnostic value of general thermometry:—

General thermometry has been found useful in diagnosing cerebral hemorrhage from alcoholic poisoning, the general bodily temperature (rectal) falling at first below the normal in cerebral apoplexy,[1] but not in drunkenness. Such a case is recorded by Mr. Foster in the *Lancet* for December 27, 1879.

General thermometry also assists us in the differential diagnosis of true apoplexy from the so-called apoplectiform seizures, which occur in progressive general paralysis, disseminated sclerosis, cerebral softening, and also from uræmic coma. Charcot says, "I have demonstrated by repeated observations that, in true apoplexy, especially when it depends upon cerebral hemorrhage, the temperature constantly diminishes some moments after the attack, and afterwards remains, generally for at least twenty-four hours, below the normal standard, even when intense and reiterated convulsive fits occur;" whereas, in the congestive attacks (so-called apoplectiform seizures) which occur in progressive general paralysis and in disseminated sclerosis, "the temperature, on the contrary, rises above the physiological standard, and tends to become gradually more and more elevated, during the whole continuance of the attack."

In cases of cerebral softening, according to Bourneville, the "period of initial lowering" of temperature commonly met with in cerebral hemorrhage, is either absent or much less slightly marked; and, after the first two hours in a case of softening, the temperature may suddenly rise to 102° or even 104°, though it

[1] Charcot on Diseases of the Nervous System, New Sydenham Society, 1877, p. 209; also references there given, especially Bourneville, Etudes Cliniques et Thermométriques sur les Maladies du Système Nerveux. Paris, 1872.

soon descends again to the normal standard, and afterwards exhibits altogether irregular oscillations (unless the pons Varolii be the part affected); whereas, in cerebral hemorrhage, it is found that, if the temperature, after the "initial lowering" rises soon after the attack beyond 102.5°, it rarely sinks again to the normal standard, unless under the influence of a shock resulting from fresh hemorrhage (Bastian[1]). "In uræmic coma, according to Bourneville, the temperature of the body begins to fall at the onset of the seizure, and continues to sink as long as the coma persists, so that it may fall as low as 90° Fahr. in fatal cases. On the other hand, in coma due to cerebral hemorrhage or softening, the lowering of the temperature is slighter in amount, and, in cases not fatal within this period, rarely lasts longer than twelve to twenty-four hours" (Bastian).[2]

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The Nature of the Diphtheritic Membrane.

There have been few subjects in pathology more debated than diphtheria, and the special lesion which characterizes it—from which indeed it takes its name; and few about which so much needless confusion and mystery have clung. We may now fairly assume that the vexed question of identity between this disease and that styled "membranous croup" has been set at rest, and it is not intended here to raise it again. At any rate, it has been shown conclusively on all sides that there is no anatomical difference in the two diseases, but only a topographical difference as to the seat of the exudation; and similarly, one by one, all etiological, clinical, and other distinctions have faded before the exhaustive analysis of modern inquiry. Still, however, pathologists have differed much upon the subject of the nature of the false membrane in diphtheria, and it is only one instance out of many in pathological histology which show how various may be the interpretations put upon microscopical appearances. The reason for divergence of opinion is not a simple one. It depends, in one instance, upon the different stages at which the exuded product has been observed; in another, upon the different seat at which it has been formed; and sufficient account has not been taken of such essential points as these, whilst too much stress has been laid upon other and more accidental features. The sad confusion which resulted from the introduction of the terms "croupous" and "diphtheritic," as general pathological phrases, indicative of various forms of inflammation of mucous membrane, with which the German school is to be credited, has done much to complicate the plain facts of the case; and the non-recognition of the fact that the effects of local irritation of a simple kind lead to changes on mucous membranes identical with those produced by the specific irritation of the diphtheritic poison is yet another element which still obscures the subject. A remarkably lucid exposition based upon carefully conducted study of this phrase of the question by M. Leloir, in the current number of *Archives de Physiologie*, seems to us to be worthy of attention. Although this observer arrives at conclusions differing in some points from those of others, yet he has succeeded well in harmonizing many discordant views, and has placed the matter in so clear a light that we think it well to briefly follow him in the course of his reasoning.

M. Lelior commences by a brief historical summary of the views held upon the nature of the diphtheritic false membrane, and he shows how, from having held the opinion that this is purely a fibrinous exudation, pathologists have come round to view it as one of purely epithelial transformation, the first to enunciate this view being Wagner in 1866. The truth indeed lies between the two schools, and the way at which this has been arrived has been by experiment. Many ob-

[1] Paralysis from Brain Disease, 1875. [2] Ibid.

servers have hitherto tried to establish the identity between the membranous exudations following the application of irritants to mucous membranes and the specific membranous formations, but have been subjected to much hostile criticism and have failed to carry conviction. Leloir has followed the same course, producing the exudations on the fauces and pharynx in dogs, rabbits, and guinea-pigs, chiefly by means of ammonia, and observing the changes produced both by the naked eye and by microscopical examination at intervals varying from fifteen minutes to two or more days after the exposure to the caustic. He has thus been able to trace all stages of evolution of the false membrane. At first the change is simply denoted by redness of the affected patch, which sets in almost immediately after the application. But already the superficial cells of the stratified epithelium exhibit notable changes. A clear space appears around their nuclei; the cells are enlarged, but remain connected, whilst in the deeper strata there is evidence of their proliferation, and the vessels of the submucosa are gorged with leucocytes. About an hour after the application the patch has assumed a semi-transparent opalescent appearance; the perinuclear clear spaces have enlarged, the cell-protoplasm has become fibrillated and of a glistening character, whilst the nuclei remain in part unchanged, in other parts increased in number but not in character. Thus in this stage the upper layers of what is now a distinct false membrane present a reticulate appearance, wholly due to changes in the epithelial cells themselves; but in a very short time—five to eight hours—this primary reticulum begins to disintegrate, leucocytes and a fibrinous exudation penetrate the meshwork, until there is formed a thick white opaque membrane, that with which we are most familiar in diphtheria. In this third stage of its evolution the membrane can be resolved into two distinct parts—a *superficial*, composed of fibrinous filaments entangling pus-cells, degenerate epithelial cells, and fragments of the primary reticulum, which still persists in a modified form in the *deeper* layer. In the fourth stage the membrane has assumed a yellowish-gray colour, the epithelial reticulum is almost entirely broken up, and replaced by the exuded inflammatory material; and the final stage is that of disintegration of the false membrane, which assumes a pulpy consistency and yellowish colour. If the inflammation has been very intense, the vessels in the submucous tissue are compressed, and necrotic processes of a more or less deep extent take place.

Now, on comparing these changes with those which take place in pharyngeal diphtheria, a perfect similarity is observed between them. As may be imagined, M. Leloir has had no opportunity of studying the earliest stage of the membrane in this disease, but he was enabled in two cases to meet with areas of exudation in the second or "opalescent" stage, and he found there the reticulum formed from altered cells, the nuclear proliferation, and the commencing invasion of the reticulum by fibrin and leucocytes, just as in his experimental cases; groups of micrococci being found in addition. And so, indeed, with the latter and better known stages of the diphtheritic membranous formation; a close identity was found between it and that produced artificially upon the pharynx, fauces, epiglottis, and vocal cords. In the non-stratified epithelium of the larynx and lower air-passages there is no scope for the formation of the epithelial reticulum, and the false membrane is then almost entirely composed of leucocytes and fibrin, a distinction which sufficiently accounts for the well-known difference in the degree of adhesion to the subjacent mucous membrane in this site as compared with the pharynx. The fact that in diphtheria the membrane will re-form after being detached, whereas it does not in the case of simple irritation, is explained by the persistence of the cause of irritation—the specific poison—in the former case, and its absence in the other; and probably also from the blood-plasma being altered in diphtheria, and able more readily to traverse the coats of the vessels. Thus

a diphtheritic false membrane is composed not of material simply exuded from the blood alone, nor of alterations in epithelium alone, but both the blood and the epithelial tissues have an important share in its production, the epithelial elements taking a far larger share in the regions where they are normally stratified than where they exist only as a simple layer; and in the former regions it can be shown how (except in a few rare instances, where the inflammatory exudations seem to pass through the epithelial strata almost *ab initio*) the false membrane is primarily of purely epithelial origin, how it becomes more and more mingled with products of exudation, which finally almost wholly compose it. The suggestion, too, is thrown out that cases of death from asphyxia in children, which may occur in the very early stages of the disease, do so by the glottis becoming occluded by the mere preliminary epithelial swelling in addition to the submucous hyperæmia, before the process has reached the stage of actual membrane formation.

Whilst, moreover, no anatomical basis of distinction exists between diphtheria and croup, neither can any difference be established between the pseudo-membranous products following experimental irritation and those due to the poison of diphtheria. Nay, more than this. M. Leloir declares that the same anatomical identity underlies all membranous inflammations of the mucous membrane, whether this be in "herpetic angina," in "pellicular" tonsillitis, mucous patches, chancres, etc. And, if this be true, we have here only another illustration of like effects following a multiplicity of causes. It is surely far better to interpret facts in this light than to seek in the mere effects of disease for the differences which lie deeper in the organism—viz., the nature and mode of evolution of the so-called "irritant" (in its widest sense) that is at the root of the manifestations. The concluding paragraphs of this paper are taken up with a comparison between these processes and those of pustular eruptions on the skin, but space forbids our entering on the interesting and suggestive inquiries there opened.—*Lancet*, Sept. 4, 1880.

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Treatment of Infantile Syphilis.

M. J. Simon, in a course of lectures upon the therapeutics of infancy, delivered at the Hospital for Sick Children in Paris, states that mercury is of real use in infantile syphilis. He advises that the following course of treatment should be rigorously carried on. The child must be rubbed morning and evening with Neapolitan ointment, the friction being made alternately in the axilla, groin, and popliteal space. Four times a day five drops of the Van Swieten's liquor should be administed in a little milk, the dose being increased, if necessary, to thirty or forty drops per diem. A wooden spoon or a porcelain cup should be employed to contain the liquor, since silver soon becomes covered with an amalgam which causes an alteration in the mercurial preparation. This treatment should be continued for some months, the quantity of mercury given being progressively raised and lowered.—*Practitioner*, Aug. 1880, from *Le Progrès Médical*, July 3, 1880.

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Hemorrhagic Syphilis.

Dr. J. Edmund Güntz records (*Schmidt's Jahrbücher*) the following interesting case:—

N. N., a female child of a woman who had twice miscarried in the sixth month, and aborted once in the third month. Externally the child seemed healthy and remained so until the fourth day when it became uneasy, and small blisters appeared on its feet. The child did not move its arms at all, and when put into the bath they hung quietly in the water.

When Dr. Deahna, who reports this case in *Wurtemb. Corr.-Bl.* XLIX. 40, 1879, saw the child on the sixth day, the navel-string had fallen off, and the hands and feet were slightly œdematous. On both soles of the feet the corium was exposed, and also on the great toe. On the fingers, on the face near the nose and near the ears, there were blisters with clear water contents; both arms were paralyzed; the feet could be moved; the breathing was free, and the internal organs appeared to be normal. Mercurial baths were prescribed. On the seventh day the blisters near the ear (pemphigus) had coalesced but new blisters appeared on other portions of the body. The first crop of blisters took the form of ulcers. On the eighth day almost all of the blisters had opened, leaving the corium exposed. On the ninth day the doctor observed that blackish crusts formed on the child's lips, and that when they were washed off the tissue beneath was found to be normal; notwithstanding, there was a constant oozing of blood from the surface of the lips and from the mouth. Blood also came from several places where the epidermis was wanting. There were no more blisters formed. On the tenth day large and numerous ecchymoses were observed on the lower portion of the thigh, and two smaller ones on the left conjunctiva; the right knee was swollen, and the child could not sleep, but continually cried out. On the eleventh day there was bleeding from the navel and arms. The bleeding from all the places mentioned continued on the twelfth day, and in addition from the mouth. The child died on the next day.

The author believes that this was beyond doubt a case of hemorrhagic syphilis, as the existence of the syphilitic diathesis in the child was established, and the fact that the parents had had syphilis was beyond dispute. He holds that the claim of Behrend, that the hemorrhagic form of hereditary syphilis follows usually syphilis of a recent date, is not in accord with this case, as the syphilis of the father dated back to 1870 and 1871.—*Physician and Surgeon*, Sept. 1880.

Paralysis in Acute Diseases.

In an important monograph on this class of diseases by M. LANDOUZY,[1] recently published, the author commences by stating his reasons for restricting his subject to the study of akinesiæ or motor paralyses, and amongst them, to *superadded* paralysis (*paralysies surajoutés*), that is to say, those which do not essentially form one with the primitive malady, or which only supervene along its evolution as an epiphenomenon or complication (*Lyon Médical*, July 4, 1880). By so doing, he believes himself to be conforming to tradition, for in the language of the schools, the paralyses in these acute diseases comprise only "those of the paralyses which, supervening, either during the course of or more frequently at the decline of convalescence, sometimes even after the cure of acute diseases, evidently arise from them, are dependent on them, but are only an accessory, purely contingent and even somewhat rare accident." Thus considered, these akinesiæ may be divided into three classes: 1. The paralyses arising from acute diseases; 2. The paralyses which follow acute diseases; 3. The paralyses evoked by acute diseases. These paralyses have been pointed out under a great number of different conditions. The writers of the eighteenth century have noted them in variola; J. Frank, after dysentery; Delius of Erlangen, in scarlatina; Baillarger, after erysipelas, etc.; but it is especially diphtheria which has furnished the greatest number. To this disease are referable the antiquated facts of Bellini (1680), of the elder Chomel, of Ghesi, Samuel Bard, etc.; to it also are owing the recent researches of Orillard, Trousseau, Lasègue, Maingault,

[1] Des Paralyses dans les Maladies aigues. Par Dr. L. Landouzy. Paris: Baillière et Cie.

Gubler, etc. All these paralyses, however, do not behave in a similar manner; according to the disease in which they originate, they show themselves under different conditions of form, duration and evolution. On this point, that opinion of Gubler's cannot be accepted, which, according to his happy expression, believes in the equality of acute diseases in presence of the paralyses. On the contrary, each one of them requires a separate description, and this chapter of clinical analysis forms the first part of M. Landouzy's book. In the first rank we find the diphtheritic paralyses, of which the frequency is great: 26 out of 210 cases, according to Rayer, and 10 per cent. according to Sanné; therefore they have more specially attracted attention. Sometimes generalized and sometimes local, they may attack many regions; as a rule, it is the muscles of the velum palati and of the lower limbs which are attacked by inertia (81 times out of 117), but the motor troubles sometimes localize themselves on the bladder and rectum, the motor muscles of the eyeball (Perati), the agents of accommodation (Trousseau), or even, though more rarely, on the diaphragm and the muscles of the face (Rosenthal). The longer the time from the commencement of the diphtheritic attack that elapses before the appearance of these paralyses, the more they have a tendency to generalize themselves rapidly. There is no relation between their gravity and the apparent degree of the primary intoxication, any more than with the presence of albumen in the urine, a fact to which a certain importance had been attached up to the present time.

M. Landouzy very rightly lays stress on the diaphragmatic paralyses of diphtheritic origin; they are greatly to be dreaded when, in children, after a pultaceous angina, fits of cough and dyspnœa supervene suddenly. Cardiac paralyses, with the paralyses of the œsophagus, are also to be feared, since they represent the most frequent *modus operandi* of death in diphtheritic paralysis. This is an important point, and one well calculated to disturb the calm of those who are inclined to believe in the almost total immunity from diphtheritic paralysis. The bulbar localizations of diphtheria are less rare than is supposed, and such attacks are often the most sudden. M. Landouzy relates, under this head, two cases which came under his own personal observation, of death by syncope, precisely at the moment when danger appeared to be least imminent.

After diphtheritic paralysis, those most frequently met with are unquestionably typhoid paralyses. Like the preceding, they show themselves under the most varied aspects, paraplegia, hemiplegia (Nothnagel), sensorial paralyses, vesical paralyses (Béhier and Hardy), bulbar paralysis (Bailly, Marotte, and Liouville), according as they may be slowly or suddenly generalized, or finally localized. The cases of paralysis of the posterior crico-arytenoid nerves collected by M. Villemin and others, after even slight attacks of relapsing typhus, may be relegated to this category.

Typhoid fever may also give rise to certain motor troubles of a peculiar aspect, such as certain tremblings pointed out by some writers, of which some may put on the appearance of a true sclerosis in patches. The case reported by A. Chauffard affords an interesting example of this class. In this category of facts may also be placed aphasia following enteric fever, a complication which is now thoroughly recognized, and of which Trousseau and J. F. Weisse have cited the first cases. Thus, adds M. Landouzy, paralysis in typhoid fever seems to influence either the centres or the nerve conductor, or the muscle itself.

After the typhoid paralysis comes the turn of paralyses in petechial fever and acute dysentery, with the examination of the doctrine of reflex paralyses in cholera and intermittent fever.

The study of paralysis in connection with variola is of serious interest. The examinations after death, which have been made during later years, contribute to

a great extent to clear up the pathogenesis of these various disturbances. They are not so frequent as was originally supposed, since, out of a total of 2000 patients, M. Huchard has scarcely found ten cases of paraplegia; but the cases are complete, thoroughly observed, and accompanied by incontestible anatomical verifications. Amongst the latter, the most interesting points are those of atrophy localized in consequence of parenchymatous neuritis pointed out by Joffroy, and the cases of progressive paralysis, with diffused myelitis, which may be credited to Westphal.

As to the paralysis in connection with pneumonia already thoroughly studied by Graves, Macario, Rosenthal, Charcot, and Vulpian, and finally and especially by Lépine, their principal interest consists chiefly in the history of the theories to which they have given rise. Considered by Gubler as of anæmic origin, to Lépine they are only the result of atheroma of the cerebral vessels. The hemiplegia of pneumonia, in fact, is almost exclusively met with in old people. As to the pleuritic hemiplegia on which theses have been written by Valicourt, Bertindu, Chateau, Aubuin, etc., the principal characteristic is the absence of intellectual disturbance, impediments of the speech, and the presence of a certain degree of variation. It is especially after purulent pleurisies and washings out of the pleura that the opportunity of observing them has been met with.

In order to form an exact notion of the direct conditions of the mechanism and of the nature of paralysis in acute disorders, in fact, to comprehend in what relations of subordination they stand in connection with each other, two principal questions ought previously to be answered. 1. Is the element of pyrexia capable of hindering the action of the neuro-muscular system? 2. What are the exact data furnished on this question by *post-mortem* examinations?

To the first question, M. Landouzy answers unhesitatingly in the affirmative. Pyrexia may act on the neuro-muscular system in two ways, either by bringing on hyperthermic lesions in it, or by impregnating the nerve-axis with morbific agents, like the toxic myelites, of which the existence is now thoroughly acknowledged. Hyperthermia acts on the muscle from the absence of oxygenation, which brings on the local death of the contractile elements (thick disks), or, indeed, by production of colloid degeneration, or the mouldy condition (*etat moisi*). It affects the nerve-conductor (a much more uncommon fact), and may then bring on a true parenchymatous neuritis, a process of which Joffroy's cases are full of remarkable examples; finally, it affects the nerve-centres, as Buhl's observations and Renaut's most recent researches on the hortensia tint seem to prove. The colouring matter of the blood, escaped from the globular element dissolved by heat, filters with the sanguineous serum which serves it as a vehicle across the connective meshes of the gray cerebro-spinal masses; the nerve-element no longer finds in this pathological medium the essential elements of its regular nutrition, and its existence is thus compromised.

As to the impregnation of the nerve-axis by the morbific agents, does it not obviously appear, in presence of the almost constant spinal fashion of the majority of these paralyses, of the intense rachialgia of variola, of the cervico-dorsal pains of typhoid fever; finally of the meningeal inflammation, of which several necropsies have revealed the existence? In fact, the *post-mortem* examinations now performed with a delicacy which the observers who lived at the beginning of the century had no prescience, have proved the existence of these material lesions in the most distinct way; whether variola, typhoid fever, or diphtheria be taken, it is seldom that anatomical disorders, corresponding exactly with the extent and degree of the paralytic disturbances observed during life (diffused myelitis in smallpox, according to Westphal) meningitic patches, degeneration of the ante-

rior roots in diphtheria as discovered by Oertel, Pierret, and Déjérine, are not to be met with.

At the present time, therefore, we find ourselves far in advance of the theoretical ideas which had led the first observers to describe these paralyses under the name of asthenic paralysis of convalescence, of diffuse essential reflex paralyses, etc. Can the peripheric origin itself yet be retained, in presence of this quasi-general consensus of the description of central lesions, especially since the important researches of M. Ranvier, who has demonstrated that the first result of a ganglionic central lesion was to provoke an immediate alteration in the peripheric extremity of the corresponding nerve-conductor (of Doyère's patch)? However, whilst seeming thus to have as a common link the same point of departure, all these paralyses do not reveal an univocal process. They also differ in their local determinations. These differences have their *raison d'être* in individual predisposition, but especially in the nature of the injuring cause. It is easy, in fact, to comprehend that variola and diphtheria do not proceed in the same way in their work of destruction; the first acting specially by the hyperthermic method, like dothinenteritis, the second seeming to strike the nerve element especially by means of toxic impregnation.

M. Landouzy gives some interesting particulars of the theory of ascending neuritis (the neuritis migrans of the Germans), a theory especially supported by Friedreich and Leyden, who consider the spinal lesions as consecutive on the propagated inflammation of the palatine nerves. This theory, which the facts of paralyses of the velum palati supervening in the course of a cutaneous diphtheria seem already to have made doubtful, does not seem to have been sufficiently demonstrated, notwithstanding the experiments of Tiesler and Finberg.—*London Med. Record*, Aug. 15, 1880.

Hysterical Anæsthesia.

At the late meeting of the British Medical Association, Dr. BRISTOWE made the following remarks in introducing a discussion on hysterical anæsthesia:—

It resembled, he said, other forms of hysteria in its actual characters. There was, for example, anæsthesia as regards touch, temperature, pain, and the condition of the muscles. These conditions were often associated; but cases now and then occurred in which analgesia was more marked than the other phenomena. In a still larger number of cases, the conditions were more or less modified. In regard to the sense of heat and cold and touch, anæsthesia depended a good deal upon the extent of surface touched. He had observed in some cases, where there was total anæsthesia to ordinary touch and to pain, as shown by pricking the skin, that the patient had felt when he had grasped the limb. In many cases, anæsthesia on one side was connected with hyperæsthesia on the other side, or in some other region; and even in the surface which was anæsthetic, certain portions sometimes remained hyperæsthetic. The muscular condition was often altered. There was some loss of power, some rigidity, some loss of the muscular sense, in virtue of which the patient was unable to use the hand or determine the position which it occupied. With regard to inco-ordination of movement, he had failed to recognize it. In a large number of cases, anæsthesia was hemiplegic, and in some few cases it was general; it perhaps affected the whole body, or one part at one time and another at another; and sometimes it was transferred from one side to the other. In one of his cases, three-fourths of the body were anæsthetic, the other portion being hyperæsthetic. In other cases, the anæsthesia was irregularly distributed. In many cases, the organ of special sense suffered in a remarkable way: hearing was impaired; the taste was modified; the sense of smell disap-

peared in a greater or less degree; and the sight became affected. In ordinary hysterical anæsthesia, the taste was not always impaired; sometimes it was totally annulled on the affected side, and some patients had no taste at all. The sense of smell was often absolutely abolished on the affected side. The patient was generally incapable of distinguishing colours. Red was most frequently recognized, or its recognition was the last to disappear; and sometimes everything was described as looking white.

The first case to which he would call attention was that of a widow aged 31, who came under his care in hospital in July, 1879. She had been shipwrecked on one or two occasions, and on the last occasion (three years ago) had lost her husband. She had suffered from hysterical fits, and had anæsthesia. On coming into the hospital, the fits had almost entirely disappeared; but there were anæsthesia on the left side of the body, pain in the region of the ovaries, loss of taste and smell on the left side; and sight and hearing were totally unimpaired.

Another case was that of a girl aged 21, admitted in July last. She was first attacked with stiffness and pain in the neck, and sore-throat, in June. The muscles on both sides were affected; the thyroid body was enlarged and tender on both sides; there was tenderness of the left ovary, and total anæsthesia of the left side. She did not recognize heat and cold distinctly; she had a total abolition of the sense of pain, and almost of the sense of touch; she had lost taste on the left side, and smell in the left nostril; there was impairment of hearing in the left ear; the recognition of colours with the left eye was impaired; she called red, red, blue green, green blue, and yellow white. Those peculiarities were constant, and the patient was still in the hospital.

The third case (admitted in July, and still in the hospital) was that of a girl aged 18. The affection came on two years ago with fainting fits and pain in the spine and in the left hip and knee, and failure of sight for three months. She had anæsthesia to the middle line. There was tenderness of the left ovary. She could not distinguish between heat and cold; there was loss of taste and smell, and partial loss of hearing; recognition of colours, except red, bright green, and blue, was impaired. She had partial hemianæsthesia and an impaired muscular sense.

The next case was one of hysterico-epilepsy that had been under his care more than twelve months. The patient, a girl aged 18, had epileptic attacks, followed by anæsthesia on the left side of the body, subsequently passing over to the right side, and involving the whole of the body. She was paraplegic, and had hysterical asthenia. She was now probably in one of the London workhouses or infirmaries.

Another case was one recently published by Dr. Stone; that of a girl fifteen years of age, who had come into hospital attacked with hystero-epilepsy at the time of her first menstruation. It had been brought on remotely by an accident in which she had struck her head, but more immediately by reading some horrible story. Her attacks could be stopped by pressure upon both ovaries. She had hyperæsthesia of the lower extremities, and anæsthesia of the body above the navel. In the course of time, the anæsthesia extended so as to involve all parts of the body except the right lower extremity, which was hyperæsthetic. Not long ago, she had been sent from the hospital perfectly cured.

Another case, also under the care of Dr. Stone, was that of a girl who had complained of pain, supposed to be rheumatic, in the muscles of the arm and leg and other parts of the body for two or three months. She had attacks of laughing and crying. On admission, it was found that she had lost the sight of the left eye; everything looked like a fog; she did not recognize colours or forms. After a short time, sensation returned, and she recognized everything; but, either immediately after or a little before she recovered her sight, she became temporarily

anæsthetic on one side, lasting for a few hours—tending to show that the case was one of hysterico-anæsthesia; and that the impairment of sight, which, taken apart, might have been misunderstood, was also an anæsthetic phenomenon.

He would next draw attention to the distinction between hysterico-anæsthesia and the other forms. With regard to hemiplegic anæsthesia, he confessed that he did not recognize any clear distinction between that and hysterical anæsthesia. It was attended with loss of sensibility to pain, impairment of the recognition of heat and cold, and all the various phenomena characterizing hysterical anæsthesia. The patient not unfrequently lost the sense of taste on the same side as the anæsthesia, and not unfrequently lost the sight of the eye on the corresponding side. Within two or three years, he had three well-marked examples of that. In one case, a man aged between thirty and forty was attacked with an apoplectic fit; and, when he came to himself, he was found to be not only completely paralyzed on the left side, but completely anæsthetic on that side. There was deviation of the eyes, head, and neck, towards the affected side of the brain; and he was absolutely blind in the left eye for two or three days. The ophthalmoscope revealed nothing wrong in the posterior part of the eye. The patient recovered.

In the cases he had mentioned, the sense of smell was impaired on the left side. It was difficult, however, to determine such points in cases of apoplexy, because the patient was often affected in his mind, and not able to explain his condition. Three cases showed blindness. In one, it was temporary, involving both eyes; but the patient recovered. A case of cross paralysis had recently come under the care of Dr. Barlow. It was that of a man thirty-nine years of age, who was attacked with giddiness, vomiting, drawing of the mouth to the right side, and inability to swallow. On admission, he was found to have paralysis of the left portio dura nerve, partial paralysis of the external rectus of the eye, complete anæsthesia of the upper part of the body down to the waist. The smell was imperfect; hearing on the left side was weak. The eyesight was not carefully investigated. The patient recovered in two or three days. The point of interest was, that anæsthesia affected one side of the body, without any loss of power. The patient could use his hand perfectly. He presumed the case was due to some effusion of blood, or to some affection of the medulla oblongata.

Anæsthesia was very likely to occur after diphtheria, and he had recently had several such cases. One was that of a clergyman aged 33 or 34, who came into the hospital after an attack of diphtheria which occurred two months previously. He presented most of the characteristic conditions of diphtheritic paralysis. There were defective accommodation, owing to paralysis of the muscles of the eye; difficulty of speaking and swallowing, owing to paralysis of the abductors of the larynx; loss of power in both hands, both forearms, both lower extremities; also anæsthesia, which was considerably distributed, in the hands, the forearms, the legs, the tips of the nose, the lips, the tip of the tongue, the chin, the penis, scrotum, and rectum; the evacuations passing without his knowledge.

The distinctions between hysterical anæsthesia and the other forms were not so much in the anæsthesia itself as in the collateral circumstances associated with it. There were but few cases of hemiplegia with organic disease and anæsthesia which one would confound with hysteria; but they occasionally occurred. And there were very few cases of paraplegia of organic origin which would be confounded with hysterical anæsthesia; but he could produce examples; and so with regard to other forms.

The members present were acquainted with the investigations of M. Charcot as to the application of various metals, magnets, and other agencies, producing a restoration of sensation on the affected side, and a transference of the anæsthesia to the other. In most of the cases he had narrated, experiments had been made

as to the effect of the application of metals, but not with sufficient care. In the case of the woman whose husband was drowned, gold was applied to the cheek on the anæsthetic side, and in half an hour sensibility was restored, and the opposite side became anæsthetic. He had tried the effect subsequently with other metals, but without success. In the second case, that of the girl aged 21, it was found that copper, zinc, and the magnet had a slight effect upon the skin, producing, after twelve or twenty-four hours, a temporary return of sensation, but no transference of the anæsthesia on the other side. In the next case, copper, iron, and the magnet had slightly the same effect. In case No. 2, no applications over the eye had any effect in restoring sight. Case No. 4 showed no particular effects. In Dr. Stone's case, the application of gold caused a transference of the hyperæsthesia to the anæsthetic side, and the magnet caused a return of sensation to one leg.

Dr. MATTHEWS DUNCAN (London) said that, in the inquiries under discussion, he recognized progress in the way of observation; much had been done in arranging the diseases and finding connected groups of symptoms and phenomena. But besides this, which was a great matter itself, he knew of no decided advance in this limited department of pathology. He thought there was a greatly prevalent omission of the study of the artificial forms of these diseases. In the days of mesmerism and electro-biology people saw, in any evening party, these diseases produced experimentally, or for amusement—anæsthesia, contracture, catalepsy—splendid examples, quite as perfect as the clinical cases now related. Indeed, one could not listen to or read such cases without seeing plain and admitted evidence of their being not altogether spontaneous, but to a great extent artificial. In saying they were artificial, he implied that the artifice was partly by the patient and partly by the practitioner, and he would carefully guard against being supposed to imply anything like collusion or bad faith. Of the good faith of all concerned, he had no doubt. But his remarks would be directed chiefly to the great part played by the ovary in these affections; for with the state of this subject he was intensely dissatisfied; he noticed a want of scientific precision or positive error in the best writings. He would refer to Charcot, for whose great works he had the highest respect. He (Dr. Duncan) had lately seen three characteristic examples of these hysterical diseases, one, a case of left hemianæsthesia with contracture, one of hystero-epilepsy, and another of the same with cataleptic attacks; and in none of these did he find any of the so-called ovarian symptoms or pressure-phenomena.

Charcot gave directions for finding in the abdomen the seat of this ovary; and, speaking of palpation in the region of the ilio-pectineal line, he said that towards the middle of this rigid crest the hand would usually meet with an ovoid body, elongated transversely, which when pressed against the bony wall slipped under the finger. This was an error. The ovary was not to be felt in this way. But this was not all, for such so-called feeling was reduced to an absurdity when it was described as being done, or the ovary was described as being pressed to stop an epileptic fit, when there was tetanic rigidity, the belly being prominent, greatly distended, and very resisting. There was only one way of feeling the ovary; namely, by bimanual examination, the finger in the vagina or rectum touching or pressing on it. He had been feeling ovaries in this real and undoubted way for thirty years and more, and he had never seen any of the wonderful phenomena produced, which were said to be the result of the imaginary pressure which Charcot described. By this imaginary internal pressure it was said that, in certain cases, there were produced intense sibilant sounds in the left ear, which the patients compared to the strident noise produced by the whistle of a railway engine, a sensation as of blows from a hammer falling on the left temporal region, and a

marked obnubilation of sight in the left eye. This marvellous set of productions he had no hesitation in characterizing as artificial, or, rather, purely imaginary, as, indeed, a mass of bad observation. The same author taught his students that very commonly the use of the catheter in hysterical cases might need to be continued for months, nay years; and this was teaching a great and grave error. There was no such need. Were any confirmation required of the tenor of his remarks, he (Dr. Duncan) might find it in the suggestion in the same lectures that a hysterical woman might live long without passing urine, or only two or three grains of urea daily, and that she might get fat, or at least keep up her alimentation, by a quite inadequate supply of food.—*British Med. Journal*, Aug. 28, 1880.

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Case of Cystosarcoma of the Brain.

At the meeting of the German Surgical Congress in April, Dr. SONNENBURG, of Strasburg, showed a cystosarcoma of the brain, removed from a girl aged 13, who had been a patient of Dr. Lücke. She was said to have had inflammation of the brain in her first year, since which she had had a gradually growing tumour on the left anterior half of the skull. If this tumour were pressed, giddiness set in; she had had epileptic attacks for three or four years. There was no defect of intelligence. Pulsation was distinct. An accurate diagnosis could not be made during life. By puncture a clear indifferent liquid was evacuated; and the canula came into contact everywhere with smooth walls. The treatment consisted in drainage by a silver wire and counter-opening. The profuse secretion prevented antiseptic treatment from being carried out. Death occurred in eight weeks from meningitis. The necropsy presented a number of cranial defects, into which the dura mater covering the tumour protruded. The tumour itself proved to be a gliosarcoma of the large left frontal lobe, extending to the neighbourhood of the lateral ventricle, which was dilated; it was softened in the centre. After the application of the drainage, the epileptic attacks ceased.—*London Medical Record*, August 15, 1880.

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Unilateral Convulsions due to Brain-Disease.

An analysis of more than 500 cases has led Dr. BROWN-SÉQUARD to the following conclusions as regards unilateral convulsions due to brain-disease. 1. These convulsions can be caused by a lesion in almost any part of the brain. 2. They can be produced by any kind of lesion. 3. They can be associated with any other symptom of brain-disease, or may be, for a time or till death, the only symptom existing. 4. They can appear at once in all parts of one side of the body, or begin in any muscle or group of muscles (eye, face, neck, trunk, or limbs). 5. They can pass into general convulsions or follow such convulsions. 6. They usually last longer than general convulsions due also to brain-disease, and still longer than genuine idiopathic epileptic convulsions. 7. They often appear without loss of consciousness, either at their beginning or at any time of an attack. 8. They can take place either on the side of the brain-lesion which causes them, or on the opposite side, the cross convulsions being more frequent than the direct ones. 9. The right limbs are attacked more frequently than the left, in cases of direct or of cross convulsions, and also when unilateral convulsions appear in cases of lesion in the two cerebral or cerebellar hemispheres. 10. In the same individual and from a single lesion, unilateral convulsions can appear at first on the side of the lesion and then on the opposite side, or *vice versâ*. 11. These convulsions can appear on the side of hemiplegia or on the opposite side, the paralysis in either case, being a cross one; but they can also be direct when

the paralysis is also direct and cross while the paralysis is direct. 12. Direct unilateral convulsions are more frequently produced than cross ones by lesion of the great cerebral ganglia, the crura cerebri, the cerebellum, the pons Varolii, the medulla oblongata; while, on the contrary, cross convulsions are much more frequently than direct ones caused by lesions of the centrum ovale or the convolutions. 13. In animals, as he had found, an irritation of the base of the brain and even of the motor part of the crura, the pons, and the medulla (the anterior pyramid) generally produces muscular contractions on the corresponding side; while irritation of the so-called motor centres, or of the fibres uniting these parts with the cerebral ganglia, usually produces movements on the opposite side, so that the same general effects are generated in animals as in man. 14. Jacksonian convulsions (either when exclusively and persistently unilateral or only temporarily so) can appear on the side of the lesion, or from lesion in parts of the brain considered as not belonging to the motor apparatus. 15. The study of unilateral convulsions brings forth a large number of facts altogether in opposition to the views now held about cerebral localization. 16. The diagnostic significance of unilateral convulsions is often considerable, owing to the association of this symptom with other cerebral morbid manifestations.—*British Med. Journ.*, Aug. 28, 1880.

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On Paralytic Chorea.

At the recent meeting of the British Medical Association, Dr. W. R. GOWERS read a paper, the object of which was to direct attention to a variety of chorea which sometimes presented a difficulty in diagnosis. Three symptoms might ordinarily be recognized in chorea: spontaneous movement, inco-ordination of voluntary movement, and muscular weakness. These were not always proportioned. Any one of them might so predominate as to give a special character to the case. In the form now considered, the last-named element (muscular weakness) predominated, and appeared, at first sight, to be the only symptom. A series of illustrative cases were narrated. The arm was always the part affected, and the muscular weakness, which alone was noticed by the friends, and sometimes by the medical attendant, might be very great and real. In some cases, however, the natural weakness might be less than the loss of use would suggest. There was no weakness of face, tongue, or leg. Close observation would, after a time, usually detect a slight occasional choreiform twitch, but this might be quite absent. There might be marked twitching in the other arm, which was not weak. The affection might pass off without more conspicuous spasm. Sometimes choreiform movements become more marked as power increased. The course of this form was often tedious, but did not pass into severe general chorea. The variety was brought under the notice of the Section chiefly on account of the diagnosis; since, in several cases which had come under the author's notice, the nature of the affection had been misconceived. In his experience, whenever a child, between the ages of seven and fifteen, presented gradual loss of power in one arm, without affection of the face, tongue, or leg, the disease was always chorea. Even although choreiform movements might not be observed, the subsequent progress of the case would always justify the diagnosis. The paper concluded with some remarks on the possible relation of the change in the nerve-elements in this form to that which underlay ordinary chorea.—*British Med. Journ.*, Aug. 28, 1880.

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Symptoms in Menière's Disease.

J. GOTTSTEIN (*Zeitschrift für Ohrenheilkunde*, Band ix.) arranges the forms of disease connected with deafness and disturbances of equilibrium (Menière's

disease) in two groups: 1. Those in which the affected persons, mostly children, present symptoms which may be called meningeal irritation, are ill for a shorter or longer time, and after complete recovery retain the deafness and the staggering walk; 2. Those in which deafness and giddiness suddenly appear without disturbance of the general health. The cases of the first group are referred by the author to cerebro-spinal meningitis, contrary to the view of Voltolini, who includes them under the name of "otitis labyrinthica." This view is supported by the circumstance that, among 254 patients with ear disease, who came under treatment from March to October, 1879, twenty-five cases were found with the so-called otitis labyrinthica. It almost seemed as if there were an epidemic of this affection. Six cases must be excepted, the beginning of which dated a year and more back. Among the remaining nineteen cases there were again six, in which, partly with certainty and partly with more or less probability, meningitis was found to be the starting point of the symptoms of Menière's disease. In the remaining thirteen cases, there was fever with violent headache, and in two cases only was vomiting absent at the beginning of the disease; in nine of them there was more or less profound benumbing of the sensorium; in three cases only, fever, headache, and vomiting, were the sole symptoms which preceded the ear-disease. All the patients, except one, belonged to the classes who live on poor food, and their ages varied from two to sixteen years. With regard to this phenomenon, and to the circumstance that an epidemic of cerebro-spinal meningitis prevailed (in Silesia) at the time when the author observed these cases, Gottstein does not hesitate to connect them with this epidemic. Of what nature the morbid process is which affects the organ of hearing in this malady, he has not been able to determine, in consequence of absence of anatomical and pathological researches. Of cases of the second group, which, on account of the suddenness of the onset, Gottstein designates an apoplectic form of Menière's disease, the author has seen three only. In all these, the affection was of a secondary nature. In the first case, the primary malady was tabes dorsalis; in the other two, leukæmia. The author desires by his contribution to give a stimulus to the decision of the question, whether the genuine disease of the acoustic nerve in its course and in its termination occurs really so frequently as it has been hitherto assumed.—*London Med. Record*, Aug. 15, 1880.

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Primary Carcinomatous Hæmorrhagic Pleuritis.

Dr. SAVARD (*Progrès Méd.*, 1879, No. 31) relates the case of a patient, aged 40, who was received into the hospital on the 7th of January. He stated that, twenty days previously, he had a sudden rigor, with cough, difficulty of breathing, and acute pain in the left side, which compelled him to leave off work; it returned in the following day, although somewhat milder. His appetite was nearly lost, and he had bloody expectoration after the lapse of eight days. The left side of the chest was enlarged and immovable; from apex to base there was a dull percussion-sound, whilst the right side was everywhere sonorous. Blowing breathing was heard on the left side; the pectoral fremitus appeared very weakened, the heart was displaced towards the right. There was also slight œdema in the left chest, although the patient lay mostly on the right side. On account of severe dyspnœa, punctures were made on the 9th, 10th, and 13th, by which 1000, 1200, and 1500 grammes of fluid, containing much blood, were evacuated. There was almost no change in the physical state after the punctures; the subjective symptoms were indeed improved for a short-time, but the gain was only temporary. The patient sank visibly, soon began to be delirious, and died on January 22d. At the dissection, an effusion, with much blood, was found in the left pleural cavity. The pleura itself was covered with a hard membrane,

two centimetres thick; the lungs were compressed to the size of a fist, and pressed against the vertebral column, and section showed them to be permeated with hard masses, apparently of a cancerous nature. On microscopic examination, the dense deposits on the pleura were seen to consist of organized connective tissue, fenestrated with numerous cavities lined with epithelial cells, so that at first sight the disease appeared to be alveolar cancer. The cells lining the wall were not everywhere cylindrical, but showed in some of the spaces a cubic appearance. The case was therefore essentially one of epithelioma (épithéliome métatypique, Malassez), the original source of which cannot be ascertained exactly. In the only case analogous to the present one, described by Malassez, a cancer had passed from the lungs into the pleura. In the present case, however, there was found in the lungs a less characteristic state, so that the possibility of the origin of the cancer in the pleura cannot be excluded. If this cancer belonged primarily or secondarily to the pleura, the clinical phenomena were highly characteristic; viz., the abundant hemorrhagic effusion, its speedy return after evacuation, the œdema of the thoracic wall, the bloody expectoration, and especially the slight change in the physical signs after puncture. Nothing but the acute onset of the chest-symptoms could lead to an error in diagnosis.—*Lond. Med. Record*, Aug. 15, 1880.

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On the Curability of Attacks of Acute Phthisis (Galloping Consumption).

Dr. T. M. McCall Anderson, of Glasgow, at the late meeting of the British Medical Association read a paper on this subject, of which the following is a brief abstract.

By the term acute phthisis, the author meant an acute pulmonary affection, accompanied by high and continuous fever, running a rapid course, and leading invariably to more or less destruction of lung-tissue if the patient survived long enough. He recognized three varieties of the disease: 1. Acute pulmonary tuberculosis; 2. Acute pneumonic phthisis; 3. Acute pneumonic phthisis complicated secondarily with the development of gray miliary tubercles. He thought it impossible to distinguish the second from the third variety during life, but that the first might be suspected when the disease set in suddenly with high fever, great prostration, profuse perspiration, lividity, and great acceleration of breathing, and when these symptoms were *out of all proportion to the results obtained from a physical examination of the chest.* Having given extracts from the writings of Walshe, Trousseau, and others, showing that the profession was very hopeless as to such cases, he pointed out that, in a good many cases, he had obtained excellent results from treatment, of which the following was an outline; 1. Careful skilled nursing, with constant feeding, and stimulants in small quantities often (from 4 ozs. to 10 ozs. daily); 2. Each night a subcutaneous injection of $\frac{1}{100}$th to $\frac{1}{60}$th of a grain of atropia; 3. Remedies specially adapted to the removal of fever; (*a*) ice-cloths to the abdomen; (*b*) quinine, 10 to 30 grains, in a single dose, once daily; (*c*) a pill, composed of one grain of quinine, half a grain of digitalis, and from a quarter to three-quarters of a grain of opium, every four hours. In addition to this, special symptoms—diarrhœa, constipation, and the like—must be treated on ordinary principles, and, of course, the treatment indicated must not be used in a mere routine way, but adapted to the surroundings of each individual case.—*British Med. Journal*, Aug. 28, 1880.

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Calcium Salicylate in the Serous Diarrhœas of Infants.

Dr. Alexander Hutchins, of Brooklyn, has treated in private practice, within the past three months, some twenty-seven cases of serous diarrhœa in in-

fants, ranging from two months to two and one-half years of age, using calcium salicylate only; that some of the cases were seen but once, many only twice, and none above four times; that, in all, the disease is known to have been promptly and permanently controlled, justifies his calling attention to this method of treatment.

Whenever the dejecta were of the serous character, whether the flux was more or less profuse, in all the cases where the tendency is to cholera infantum, when collapse is to be looked for from excessive drainage of the serum, the calcium salt acted promptly in checking the frequency of the movements—ultimately in controlling them, and with a promptness and efficacy that the writer has never experienced by any other mode of treatment. The patients ranged in age from two months to two and a half years. No discrimination was made as to diet, which, in some instances, was breast milk exclusively, in others, condensed milk, the patent foods, or a mixed diet. In no case was any modification of the previous diet called for, save in the matter of quantity. All the patients were in good social and hygienic surroundings. In all cases the dose was 3 to 5 grains from 2 to 4 hours. The total quantity consumed by each patient varied between 6 and 18 powders. In a few cases minute doses of aconite and veratrum were given during the stay of the high temperature, and in other few, small doses of quinia were followed up after the subsidence of the disease.

It was noted that the medicine seemed to have no influence in changing the secretions so as to modify the character of the evacuations. The discharges would be under control for a time, say from 2 to 12 hours, and the next movement would be a watery one, but there would be no further recurrence of the diarrhœa. There might be a return to normal movements, or there might be a change to a diarrhœa of indigestion, or to a diarrhœa from irritation of the mucous surface, each of which would require some special interference. These sequelæ were exceptional, but in no case did the serous discharge recur.

It was noted, likewise, that this treatment necessitated very little interference with the usual diet of the child. It would be nearer the exact fact to say that no interference was required. In the majority of cases the discharges were so promptly checked that an indigestion did not occur.

It was further noted that the calcium salt had no appreciable effect on any one of the other forms of intestinal flux, whether lienteric or inflammatory. The serous diarrhœa alone seemed to be amenable to this drug. Each of the other forms required special treatment.

An additional fact was noted, that the vomiting accompanying these diarrhœas was controlled so soon as the medicine began to show its effect on the discharges. Certainly without exception the stomach tolerated the presence of the drug.

The medicine is administered by mixing the 3 or 5-grain dose in a teaspoonful of sugar, adding a few drops of water at a time till the whole is thoroughly moistened, and then thinning it with water so that it can be easily swallowed.

In the process of mixing the powder an effervescence occurs, which the prescriber recognizes as due to the release of carbonic acid in the formation of the new salt. Also in the process of mixing, a pungent odor of chlorine is not infrequently perceived.—*Proceedings of Med. Soc. of County of Kings*, Sept. 1880.

Surgery.

Malignant Syphilis.

Dr. KROWCZYNSKI, of Lemberg, enters at some length into the history of syphilis, and particularly of its more severe forms. He then relates the following case (*Vierteljahresschrift für Dermatologie und Syphilis*, 1 Heft, 1880): An unmarried woman, aged 30, of healthy appearance and good muscular development, was admitted into the hospital on November 4, 1875. The patient stated that her present illness began in October, and followed intercourse with a man who was afterwards ascertained to be suffering from syphilis. On examination, two indurated sores were found in the neighbourhood of the commissure. Both labia were œdematous, and the inguinal glands were enlarged, hard, and free from pain. There was also a white discharge from the uterus. A lotion of sulphate of copper for the sores, and a vaginal injection, were ordered. The ulcers soon began to spread, and were dressed with powdered camphor. On the 8th November they had united, forming a large horseshoe-shaped gangrenous sore. The inguinal glands became larger and tender on pressure. The strength decreased, and on November 20 shivering took place with a temperature of 100.4° Fahr. Nov. 21.—Temperature, morning, 101.8°; evening, 102°. The temperature remained above 101.4° until Dec. 9, on which day there was a violent shivering fit, with headache, pains in the limbs, and general malaise. The spleen was enlarged. The urine was free from albumen. On Dec. 10 a general measles-like rash appeared. Temperature, morning, 101.8°; evening, 131°. The ulcer of the genitals remained as before. During the following six days the temperature was always below 101°. On the 15th shivering again occurred, the evening temperature being 103.5° Next day the eruption had become papular, the papules being about the size of a lentil. The temperature during the following ten days fluctuated between 100.4° and 101.4°. On Dec. 25 there was a third attack of shivering, the temperature rising to 103.5°, and a red halo was noticed round each papule. Vesicles and pustules now appeared on the skin, and the temperature fell to 100.8°. The pustules ruptured, and left small ulcers. On Jan. 15, 1876, the ulcers were of the size of half-crowns, but the general condition had slightly improved. The general ulcer remained as before as to size, but was cleaner, and granulations were springing up at the edges. The patient from this time improved steadily; the temperature fell to 100°. The appetite returned, and the ulcers on the body began to heal. On March 27 the primary sore was healed. On April 3 syphilitic patches on the palatine arch were noticed for the first time. The ulcers of the skin healed, but left raised hypertrophic scars, which soon afterwards broke down into ulcers. The subsequent cicatrization occupied some time. No further relapse took place after this; but the patient remained in the hospital until January 4, 1877, by which time she had completely recovered. The man from whom she had contracted syphilis was now traced, and was found to have suffered very mildly, condylomata on the genitals and in the throat having been his only symptoms.—*London Med. Record*, Aug. 15, 1880.

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Removal of Encysted Tumour from Conspicuous Positions without leaving any mark.

Mr. PHILIP FOSTER, of Leeds, states (*Med. Times and Gaz.*, Aug. 7, 1880) that this kind of tumour may, unless very firmly adherent, be easily removed by making a small incision into the cyst only just large enough to allow its contents to escape, completely emptying it by pressure, and then seizing its edges, which

will be seen to project, and drawing it out. Even should a portion of the cyst be left, in all probability the tumour will not reappear. When unable to get away any part of it, I have succeeded in effecting a cure by scarifying its interior, and so setting up adhesive inflammation. Three or four days after these operations not the slightest mark or trace of their having been performed can be detected.

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Scarification as a Remedy in Skin Diseases.

Mr. MALCOLM MORRIS, Joint-Lecturer on Dermatology in St. Mary's Hospital Medical School, believes (*British Med. Journal*, Aug. 7, 1880) that multiple linear scarification deserves more notice, as a remedy in certain forms of skin disease, than has yet been bestowed upon it. In as far as concerns the application of it to port-wine marks, suggested by Mr. Squire, he has found it to be practically valueless, owing to the length of time required to produce any visible alteration or improvement; nevertheless in acne rosacea and in lupus erythematosus he thinks that Mr. Squire's system of multiple linear scarification shows an advance on the old method of operating with a single scalpel, advocated by Hebra and Volkmann.

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Short-Sight and School-Books.

According to M. JAVAL (*Bulletin de l'Académie de Médecine*, No. 44) three factors contribute towards the production of myopia in school-children: 1. Organic predisposition; 2. The influence of the medium; 3. The nature of the objects to be looked at. The first factor cannot be modified; the influence of the second can be diminished by suitable lighting of the class-rooms, though not without considerable expense; as regards the third, it is desirable that the employment of defective type in books for public schools should be prohibited. Type for young children should be large, and should gradually decrease in size according to the increased age of the scholar.—*London Med. Record*, July 15, 1880.

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Treatment of Cleft Palate.

At the last meeting of the German Surgical Congress in Berlin, Herr J. WOLFF showed a patient on whom he had performed uranoplasty and staphylorraphy with complete operative success, but, as generally happens, without improvement of the patient's speech. He succeeded, however, in having an obturator made, which could be inserted without reopening the palate, and which had yet made the speech normal, as has been proved by making the patient read. The obturator consisted of vulcanized soft India-rubber; it was hollow inside, and filled with air, and was consequently elastic and compressible, and allowed the co-operation of the muscles of the velum in pronunciation. The experience derived from this case showed the necessity of operating on the fissure of the palate in every case. Whilst, hitherto, there had always been a liability that it might be necessary again to cut open the newly-formed palate after a perfectly successful operation, in order to introduce Suersen's obturator, there could be no question now of such liability. The operation must in future be successful as regards speech, either directly or with the assistance of exercises in speaking, electricity, etc., or with the assistance of the elastic obturator.—*London Med. Record*, Aug. 15, 1880.

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Singular Obstruction of Wharton's Duct.

At a recent clinic Prof. RICHET drew attention to a curious case in the person of a young man who, while eating some bread, was seized with a sudden lanci-

nating pain, the tongue being so much raised by a swelling which took place under it that the patient could hardly speak. The nature of the foreign body which it was supposed to be in Wharton's duct was sought for in vain, when a day or two after the patient felt with his tongue the sharp point of some object. This could not be seen, but some days later a very minute fragment of straw was removed from the duct. This probably had been in the bread, and became introduced into the duct during mastication. In a well-known case of Robert's a bristle became engaged in the canal.—*Med. Times and Gaz.*, Aug. 28, 1880, from *Gaz. de Hôp.*, Aug. 17.

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The Use of the Hot-Bath in Strangulated Hernia.

In a late paper Mr. EDMUND OWEN, of London, argued that since the days of Pott, Hunter, and Cooper, there had not been that marked improvement in the treatment of strangulated hernia which the introduction of chloroform ought to have insured; that those "surgical warriors" employed the hot bath, venesections, and the nauseating doses of antimony for the simple reason that they knew of no better way of obtaining muscular and nervous exhaustion; that they were doubtless well aware that such depressing treatment would not improve the chances of recovery of the patient who should eventually be submitted to operation. He confessed that he did not understand the precise physiological action of the hot bath in aiding in the return of a strangulated bowel; Mr. Birkett spoke of it as exerting a powerful but uncertain influence over the vascular, nervous, and muscular systems. Mr. Owen maintained that an anæsthetic would supply all the advantages which the hot bath could pretend to afford; that it was a direct means of economizing time; and that, last but not least in order of importance, it saved the patient and the tender bowel that desperate employment of the taxis which the steaming bath often seemed to suggest to the medical attendant, who, with his coat off and his shirt-sleeves rolled up to the shoulders, intended having a final try at reduction. Mr. Owen agreed with Mr. Bryant, who urged that the taxis should never be employed without an anæsthetic, and that, the reduction of the hernia failing to be accomplished, the operation should be at once performed. Although strongly inclined to do so, he would not argue that the hot bath should never be employed in the treatment of a large strangulated hernia; all that he could say was, that in such cases the manipulation might effect less serious harm, on account of the constricting force being distributed around a more considerable mass of tissues; but that, in the case of a small inguinal hernia, or of a femoral hernia, large or small, its use was unadvisable, whilst for a recent small strangulation it was positively harmful. In conclusion, he asked for an expression of opinion as to whether the routine employment of the hot bath in the treatment of strangulated hernia was not a superstitious and dangerous remnant of antiquated surgery.

Mr. JOHN WOOD (London) expressed his hearty concurrence in the views just expressed. He had long been of opinion that the use of the hot bath for strangulated hernia, instead of being beneficial, was positively injurious; and that on these grounds—that the application of heat caused the dilation of the gases in the bowel, enlarged the hernia, and increased the difficulties under which the operators laboured. He had been accustomed in these cases to the application of a bladder of ice for an hour.—*British Med. Journal*, Aug. 28, 1880.

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Chancrous Folliculitis.

M. GOUGUENHEIM read before the *Société Médicale des Hôpitaux* a paper on this subject, which he had prepared in conjunction with M. Bruneau (*La France*

Médicale, April 14, 1880). The following are the conclusions arrived at by the authors. Chancrous folliculitis, or follicular soft chancre, is an affection which attacks most frequently the external surface of the labia majora. This lesion presents a pimply follicular character, which often causes it to be confounded with simple acute folliculitis. The follicular appearance may persist throughout, or it may disappear after a few days, the lesion taking the ordinary aspect of the simple chancre. The simple chancre is often coincident with the follicular chancre. Chancrous folliculitis often succeeds the simple chancre, but the converse may occur. Chancrous folliculitis may exist alone, independently of any other ulcer. Implication of the inguinal glands is rare. The chancrous follicle goes through its evolution in three of four weeks. The follicular soft chancre is inoculable; but inoculation, contrary to what nearly always happens in the ordinary soft sore, has presented in some cases a period of incubation of from eight to twenty days. The diagnosis of the affection, when unaccompanied by ordinary soft chancre is impossible without inoculation. Most cases reported by authors as simple acute suppurative folliculitis, without the test of inoculation, may be regarded as cases of chancrous folliculitis. The existence of simple acute suppurative folliculitis of the vulva is hypothetical. Secondary suppurating folliculitis may be merely a follicular soft chancre developing on syphilitic ground.—*London Med. Record*, Aug. 15, 1880.

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Primary and Secondary Amputation.

Prof. RICHET, in a lecture delivered at the Hôtel-Dieu (*Union Méd.*, July 8), made the following observations on the question of primary amputation etc.:—

"I think I ought to acquaint you with the reasons which determine me only very rarely to practise amputation immediately after great injuries, and only when my hand is forced. At all epochs surgeons have been divided in opinion as to which of these two procedures it is most advantageous to have recourse. As far as I am concerned, during the first third of my career I was a convinced partisan of the necessity of immediate amputation, and cannot therefore blame those who practise it at the present time with a conviction as strong as that which I then entertained. But I have gradually become converted to secondary amputation, and am now one of its most earnest defenders. The theory of immediate amputation appears, indeed, at first sight, very seducing. It would seem that a patient in whom a violent injury had torn the muscles and crushed the bones could only be the gainer by substituting for this tearing and crushing a clean and regular wound—in one word, a surgical wound. Unfortunately, the practical results do not agree with the theoretical view and reasoning. In the different hospitals in which I practised surgery at the beginning of my career—at the St. Antoine as well as at the St. Louis—I found the patients on whom I had performed amputation succumbing within the forty-eight hours. Malgaigne, to whom I communicated my want of success, told me one day that he had gone through the same experience, and this it was which determined him to investigate the results of these immediate amputations. He avowed that the statistics were frightful, and that the mortality attained the figure of 86 per cent. So elevated a mortality seems of itself sufficient to prevent a surgeon following this practice; but it is of interest to seek for its reasons.

"When an individual has undergone a violent injury, his nervous system is greatly shaken by it, his pulse is depressed, and his temperature notably lowered—in a word, he is suffering from what is known as traumatic shock. Not only is the temperature lowered, but the circulation is delayed to such a point that the soft parts soon assume a violaceous colour, and then become gangrenous, at

least in places. Soon there supervene intramuscular tumefactions and subcutaneous emphysema, the precursor of sphacelus. There already exists in all these cases manifest disturbance in the two greatest apparatus of the economy—functional disturbance of the nervous system and of the circulatory system—and all of a sudden is added to these pre-existing disturbances the new shock of a mutilation. It is certain that a considerable moral depression, caused by the loss of a limb, is added to the physical depression; and this moral depression should be largely taken into account, owing to the chances of the failure of the operation. But this is not all. It will happen—not in hospitals, in which usually but slight resistance is offered to the propositions of the surgeon, but in private practice—that we meet with a refusal when we have declared that immediate amputation is necessary. What happens then? If the patient dies, it will be said that he must have died under any circumstances, and would have done so more quickly under the operation. But if he recovers—escapes, as it is called—which is not rarely the case, the surgeon and surgery will both become the objects of serious and painful blame, which is also a grievous thing. Even when the patient, as is sometimes the case, does not succumb very soon after the operation, you must still not think that he will be preserved from all consecutive danger. He will continue exposed to those purulent burrowings which so frequently follow the intramuscular sanguineous effusions. Then there are the muscular retractions and conical stump. Suppose, on the other hand, you decide for abstention, there will be necessarily a considerable number of cases prove fatal; but you may feel assured that these belong to the class of those for whom immediate amputation would certainly not have proved of any avail. Others, fewest in number, will traverse the first accidents with success. The nervous system recovers itself little by little, the circulation regains strength, and the temperature rises; and, as a consequence, two or three days afterwards, normal inflammatory phenomena begin to appear. Is this, then, the moment at which amputation will have the *greatest chance* of success? Not yet. Such, at least, was the opinion of Velpeau and of Roux, with which I entirely coincide. They never operated before the fifth or sixth day, and this also is my habit of proceeding. I may finish with an anecdote which may impress this practice on your memory. Questioned one day by a *confrère*, who asked me, pointing to a patient upon whom I was delaying the operation, 'What is your object in waiting in this case?' 'I am waiting,' I replied, 'until he asks me himself to operate; and that will not be very long, for he accustoms himself to the idea on seeing that it is no longer possible to save the limb. The operation will then become a deliverance, instead of a sacrifice—a sacrifice on which he would now not decide without repugnance.'"—*Med. Times and Gaz.*, August 21, 1880.

Fracture of the Head of the Radius.

Professor BRUNS, of Tübingen, in an original contribution to the *Centralblatt für Chirurgie*, No. 22, 1880, on fracture of the head of the radius, states that this lesion demands more attention from surgeons than it has hitherto received, and ought to be included in the list of typical fractures, as its origin and the form of the fracture are characteristic and regular, and it is not of very unfrequent occurrence. In addition to one case observed by himself, the author has collected from surgical literature twenty cases in which the nature of the lesion had been proved on anatomical investigation. These numbers, however, it is stated, give no idea of the frequency of the lesion, since the diagnosis is frequently attended with much difficulty, and in some cases is impossible.

In this injury the joint is involved, and the fracture takes a vertical or oblique direction from the superior surface of the bone, detaching a portion of the head.

The lesion is quite distinct from transverse or oblique fracture of the neck of the radius, by which the head *in toto* is separated from the diaphysis. Of the former lesion there are two forms—incomplete and complete fracture. The incomplete fracture has been produced experimentally by Bruns, and five clinical instances have been observed by Malgaigne and other surgeons. In the incomplete form, the line of fracture commences at the discoid articular surface, in some cases nearer the periphery, in others nearer the centre, passes down the neck, and ends at a blind extremity, so that the fragment still remains attached by a bridge of bone. The broken surfaces sometimes remain in close contact, sometimes diverge, and are separated by a wide gap. This form of fracture may be a fissured one, the head having been broken into a number of fragments, each of which remains attached at its base. In a case recorded by Verneuil, there was a well-marked T-shaped fracture.

In complete fracture, a larger or smaller fragment is wholly detached in most instances from the anterior portion of the head, rarely from the lateral or posterior portions. In this form the head is rarely broken up into several pieces. If the fracture be limited to the head of the bone, it is purely intra-articular; the fragment lies almost free in the joint, being attached only by a portion of ligament. If the fracture involve both the neck and the head of the bone, it is partly intra-articular, partly extra-articular, and free mobility and displacement of the fragment are prevented by the annular ligament.

In five only of the twenty-one cases collected by Bruns, was fracture of the head of the radius an uncomplicated injury. These numbers, however, it is pointed out, do not really represent the proportion of complicated to uncomplicated cases; since, in consequence of the slight symptoms of the simple fracture, and the difficulty of its diagnosis, the injury may be readily overlooked, or its true nature mistaken. In most of the complicated cases, the fracture was made out by direct observation after the death of the patient through concomitant lesions, or on resection of the injured joint. The most frequent of the various complications of fracture of the head of the radius is fracture of the coronoid process.

The most frequent causes of the fracture are a fall on the flexed elbow or on the extended hand, and direct injuries from the fall of a heavy body, from machinery, or from a gunshot wound. In fracture from indirect violence, which is of more frequent occurrence, it is very probable that the lesion is produced through the corresponding portion of the lower articular surface of the humerus, the *eminentia capitata* being driven with such force against the discoid articular surface of the radius as to compress and break away a portion of the latter bone. The fracture, for anatomical reasons, is more likely to occur in the extended than in the flexed position of the forearm. In full extension, the posterior half of the articular surface of the head of the radius is free, and projects posteriorly beyond the end of the humerus, the full force of which, in case of a fall on the hand, is applied wholly to the anterior half of the radial articular surface. In flexion of the forearm, the whole of the upper surface of the radius is in contact with the articular extremity of the humerus. The opinion of Bruns as to indirect fracture of the head of the radius being the result of force acting with the forearm in an extended, and not, as is supposed by some, in a flexed position, is confirmed by the fact of the frequent occurrence, as a complicating lesion, of fracture of the coronoid process, which injury, as has been proved by the investigations of Lotzbeck and Urlichs, is almost always the result of a fall on the over-extended hand and forearm.

Bruns has succeeded in producing the fracture experimentally. On striking with much force the head of the humerus in a removed upper limb, the forearm

being extended, and the palm of the hand applied to the ground, he has twice produced a fissured fracture of the head of the radius, and once a fracture, with detachment of its anterior portion. It is mentioned, however, that Von Lesser and Urlichs have effected a like result with the forearm of the detached extremity flexed at a right angle.

It is believed that, if the attention of surgeons in future be directed to this lesion, its diagnosis on the living subject will become more exact. Some help will be given by a clear history of the way in which the injury was produced, and by the presence of such a complication as fracture of the coronoid process. If a portion of the outer margin of the head of the radius have been broken off, a movable fragment of bone might be felt, and at the same time, with alternate movements of supination and pronation, crepitus might be made out. In an instance of incomplete fracture, with a wide gap between the partly detached fragment and the head of the radius, the end of the bone will feel as if enlarged, and present an abnormal prominence. An injury of this kind is very liable, as was shown in a case recorded by Malgaigne, to be mistaken for incomplete luxation of the head of the radius.

From seven of the author's collected observations, information was derived as to the usual mode of healing after fracture of the head of the radius. In three instances there had been osseous consolidation with some dislocation of the small fragment; in one case upwards, in another directly downwards, and in the third case outwards. In one case, the fragment had united with the coronoid process. In each of the remaining three cases, the fragment had been converted into a free articular body.—*London Med. Record*, Aug. 15, 1880.

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Diagnosis of Fracture of the Neck of the Femur.

Dr. Bezzi draws attention, in *Lo Spallanzani*, Nos. 1 and 2, 1880, to a sign which is pathognomonic of fracture of the neck of the femur, but which is not generally known. In examining the space between the trochanter and the crista ilii, it will be found that while, on the sound side, the muscles occupying this region (the tensor vaginæ femoris and the gluteus medius) are tense, and offer to the hand a considerable feeling of resistance, they present on the affected side a deep, well-marked depression, a flaccidity and diminution of tension, from displacement upwards of their points of insertion.—*Glasgow Med. Journal*, Sept 1880, from *Centralblatt f. Chirurg.*, July 31, 1880.

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On the Mechanism of Gunshot Fracture of the Long Bones.

At the meeting of the German Surgical Congress in April last, Dr. Bornhaupt, of St. Petersburg, read a paper on this subject. It was an extract from a larger work in the Russian language, having reference to Reyher's collection of preparations of gunshot fracture. Herr Bornhaupt assumed that real perforating gunshot wounds of bone are rather rare; they are mostly complicated with fissures, which, however, are less the result of commotion than of a direct action of force. The most simple case is the wedge-like action on the epiphyses, in which the fissures, issuing from the track of the shot in the bone, may extend perpendicularly upwards and downwards, without perforating the articular cartilage. Such fissures are more or less frequent, especially when great force is applied, *i. e.*, when the channel made by the shot is long. The explanation of the forms of fracture in the diaphysis is more difficult. They sometimes resemble a stick bent in its longitudinal axis; or a ring, compressed from two opposite sides. In the first case, there may be simple transverse fractures (mostly through spent

bullets), in the second, two, three, or four longitudinal fissures. If the diaphysis be injured more towards the middle part, then the two mechanisms combine in the production of a typical form of fractures, viz., of the "spiral longitudinal fracture." The bone divides into four fragments; in addition to an upper and lower, two triangular splinters are to be found opposite the part which has been struck, forming what Bornhaupt calls the posterior longitudinal fissure. He thinks that, when the bullet has not hit directly the posterior wall of the bone, the longitudinal fissure originates through direct force, and not through the hydraulic pressure of the marrow. As the proof of this, as well as of the following statement, he described experiments on a glass cylinder, and showed that the typical fissures often do not occur in so distinct a form, and that, on the contrary, the bullet comes a second time into contact with the wall of the bone, and produces fissures of exit with many, often forty or fifty splinters, extending through more than half the length of the diaphysis. Herr Bornhaupt had never seen healed fractures of that kind in the femur, to which principally his discussion referred. In less firm, but more inflexible bones, the circumstances become more complicated; they may, however, be traced always to compression, and not to commotion. The further comparison with the splintering of glass, as well as the consideration of the histology of the spongy tissue described by von Ebner, prove that it depends on the manner in which the force is applied, whether the brittleness or the fissibility of the bone is affected; whether the bone breaks like glass, or splits like wood. Spiral fractures were explained as resulting either from embryonic torsion of the structure of the bone, or according to Koch and Filehne, from a twist at the moment when the force is applied. In conclusion, Herr Bornhaupt discussed the reaction which the bone-splinters exercise on the form of the bullet, the increase of the destruction by the latter and other subordinate factors, as, for instance, the presence of pieces of ammunition, which form at the same time centres of infection, and the secondary fractures of the primary splinters, for the study of which he most earnestly recommended experiments on fresh preparations.

Herr VON MOSENGEIL (Vienna), differing from the author of the paper, pointed out circumstances in which a simple perforating fracture, admitting mostly of a favourable prognosis, might occur. He further laid stress on the differences which the quality of the material of the bullet produces in the kind of fracture.

Herr VON LANGENBECK opposed the conclusions which might be drawn from the statements of Herr Bornhaupt, against the possibility of *débridement* in extreme cases of splintering of the humerus and femur. He thought that, if in such cases the wound were laid open very early, and the loose splinters extracted, it was possible to save the limbs and life of the wounded, especially if materials for antiseptic dressing were at hand.

Herr BORNHAUPT thought that a distinction must be made, whether the bullet had struck one or both walls; in the latter case, one could not think of saving the limb, on account of the extent of the destruction, and in the former, one could not think of extraction on account of the size of the splinters.

Herr VON LANGENBECK said that might be correct as regards the femur, but not the humerus.

Herr BORNHAUPT admitted this. Recovery occurred in many gunshot fractures of the upper arm.

Herr VON LANGENBECK said that healing did not follow in all cases. He had been successful in a late extraction of splinters, but not in an intermediate one.

Herr SCHMIDT (St. Petersburg) stated his experience in the last Russian-Turkish war, regarding the healing of gunshot fractures without extraction of splinters. The latter was only necessary if sepsis occurred, but still there were many indi-

vidual differences existent. The Turks especially resisted septic poisoning better than other nationalities.

Herr VON LANGENBECK was of the same opinion.—*London Med. Record*, August 15, 1880.

Midwifery and Gynæcology.

Measles in Relation to Pregnancy and the Parturient State.

From a study of the literature of this complication of pregnancy and parturition Mr. CHARLES E. UNDERHILL (*Obstetrical Journal of Great Britain*, July, 1880) finds it to be a rare complication of this condition, due probably to the fact that most adults are protected by an attack of the disease during childhood, but that when it occurs in pregnancy it is a very serious occurrence, and is a frequently fatal complication of both pregnancy and parturition. Mr. Underhill believes measles to be most fatal when it comes on soon after delivery, while those who are confined during the course of the disease stand a much better chance of surviving it.

Secondary Syphilitic Affections of the Vagina and Uterus.

M. MARTINEAU devotes a clinical lecture, reported in *L'Union Médicale*, May 13 and 16, 1880, to the consideration of secondary affections of the vagina and uterus, and refers to five cases which were in the Hôpital de Lourcine under his care. Vaginal and uterine syphilides are rare. Among 522 women with syphilis of the vulva, Fournier found twenty-five cases of cervical, and nine of vaginal syphilides. According to Martineau's experience the lesions are situated with almost equal frequency on the cervix uteri and vagina; of the five cases the vagina was affected in two, the uterus in one, and in two both uterus and vagina were involved.

Syphilides of the Vagina may be situated at the vulvo-vaginal orifice, or on the posterior or anterior vaginal wall. About the vulvo-vaginal orifice erosions and ulcers are seen; papules are more rare. When situated on the posterior vaginal wall the lesion is nearly always papular, and appears as a small round or oval papule of the size of a pin's head to that of a lentil, red, grayish, or whitish in colour. The number of the lesions varies usually between four and six, but there are occasionally more. In one case there were fifteen papules. They appear usually about the eighth week after the commencement of syphilis, but exceptions are numerous. Only two out of the five cases corresponded to this period. In the others, the lesions appeared later, viz., eight months and one year after the initial lesion. There is great difficulty in fixing the exact time of appearance, because the initial lesion in women often goes unnoticed. The syphilides also occur unknown to the patient and disappear without complication.

Syphilides of the Uterus may be erosive, papular, or ulcerating (the author has never seen roseola of the uterus). The erosions appear as small defined lenticular shallow ulcers. The papules present almost the same characters as elsewhere, viz., small projecting oval or elliptical disks from the size of a lentil to that of a 20-centime piece; smooth on the surface, opaline or white, sometimes isolated, sometimes agglomerated, and may be situated on any part of the cervix. The ulcerating syphilides are often confounded with the ulcerations of metritis. The syphilitic ulcerations are shallow, are seated near the os, especially towards the centre, and have a smooth non-granular surface. These syphilides are indolent, and pass unnoticed by their bearer, the physician only discovering them when he looks specially for them. They do not usually give rise to metritis,

though this is a very common complaint in syphilitic women. M. Martineau and his pupil M. Fourcault have described under the name of "*exulcerative hypertrophy of the cervix*" a lesion of the uterus which, according to them, appears during the evolution of secondary manifestations elsewhere. As M. Martineau has never met with this, he thinks it must be very rare, if even it ever exists.

Diagnosis.—This is sometimes difficult. The erosions due to syphilis are lenticular, single or multiple, coppery red, contrasting sharply with the surrounding mucous membrane, exist independently of vaginitis, and may be situated on any part of the cervix. The erosions due to vaginitis, on the contrary, have a very bright red colour, are voluminous, bleed easily, are irregular, are often seated at the base of the cervix where it joins the vagina, and extend often over the whole of one portion of the cervix. There are, moreover, the physical and functional signs of vaginitis. The lesions caused by metritis exist generally on both lips around the os; they are granular; they appear at first as projecting inflamed follicles with a whitish apex, and afterwards become characteristic erosions. Uterine syphilides, from their opaline tint, might easily be confounded with the diphtheroid chancre of the cervix, described by M. Bernutz. This, however, is a large superficial ulceration of the size of a franc piece or even larger, covered by a grayish false membrane; it is non-infecting, auto-inoculable, and unaccompanied by other signs of syphilis. Secondary syphilides of the cervix may also be confounded with herpes and eczema. An attentive examination will, however, discover in these latter affections, vesicles in groups in the case of eczema, or isolated in herpes, and also the small characteristic "collarette" will be seen at the circumference of the vesicles which have burst.

The *Prognosis* is very favourable. The lesions disappear with or without treatment. They are of importance, however, because they are a frequent cause of contagion, and are often overlooked, or mistaken for some other affection.—*London Med. Record*, August 15, 1880.

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Total Extirpation of the Uterus from the Vagina.

KALTENBACH reports (*Centralblatt für Gynakologie*, No. 11, 1880) the case of a lady, aged 57, who had ceased to menstruate for five years, and had suffered from uterine prolapse for twenty-four years. All sorts of means adopted to restrain the prolapse had failed. In February of the present year she applied to Dr. Kaltenbach for the relief of urinary and other persistent trouble occasioned by the persistent prolapse. The uterus, vagina, and bladder were completely external. The sound passed five inches into the uterus. The anterior and a portion of the posterior lip were occupied by well-defined, copiously secreting ulcerated surface. The patient readily agreed to the proposition of an operation for radical cure. The original intention was to remove the ulcerated cervix along with its vaginal attachment. For this purpose a ligature was passed on each side so as to include the uterine arteries, and a portion of the neck about 2–2½ inches long was dissected out. In executing this manœuvre, however, the operator went too far, and opened into the peritoneum high up posteriorly. This accident suggested to him the total extirpation of the uterus. He accordingly passed two fingers through the rent and pulled the uterus down through the peritoneal opening without trouble. The uterus now hung isolated, attached only laterally by the somewhat twisted broad ligaments, and anteriorly to the bladder by the peritoneal reflection. The two ligaments were now ligatured, each in three portions, and inside the ligature the uterus was separated by a stroke of the knife. The plica vesico-uterina was seized by small forceps on both sides and cut through in front of these. Although the cords in the broad ligaments were very firmly

tied, the middle ligature on the right side was seen to be defective. The corresponding part of the broad ligament became retracted, and there resulted considerable hemorrhage. By opening out the forceps fixed in the peritoneal wound edge, the bleeding part was easily exposed and definitely secured. Care was now taken, by introduction of small pieces of sponge fixed in holders, to make sure that no blood had entered the peritoneal cavity. The peritoneal wound was now closed up by six silken sutures, left long, and which at the same time fastened the ligatured portions of the broad ligaments in an extra-peritoneal position. In order to hasten the arrest of hemorrhage the lateral portions of the vagina were brought together with deep sutures, leaving only the central part of its lumen open. The inverted vagina, only now about one-third its original length, was covered with thymol wool and kept in position by a T-bandage. The operation was completely successful. The ligatured portion of the broad ligaments and a portion of the vaginal wound sloughed off. The prolapsed vagina became spontaneously replaced on the fourteenth day. After four weeks the opening in the vagina was completely closed by a smooth cicatrix. After the woman began to walk about the vagina again prolapsed. This inversion was, however, on the 20th March, cured by a kolpo-perineoraphe, which was executed at a single sitting. The author proceeds to suggest that this operation may ultimately find wider applications, so as to replace other more serious measures suggested for the cure of severe prolapse, complicated or uncomplicated. The advantage which he claims for the operation are the elevated situation of the opening into Douglas's space, the shutting up the peritoneal wound by means of suture, and the retention externally of the ligatured stumps of the broad ligaments. By the former arrangement the danger of opening the bladder or including the ureters in the ligatures are obviated. By the second arrangement it is possible to apply antiseptic measures to the extra-peritoneal wound; and by the third a free exit is allowed for the ligatures and any necrobiotic structures that are separated from the vaginal wound while it is healing.—*Edinburgh Med. Journal*, Aug. 1880.

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A Contribution to the Operative and After-treatment of Amputation of the Supravaginal Uterus in Fibroma.

This is the title of a paper by Dr. DORFF, Assistant-physician to the Gynæcolcgical Clinique in Freiburg, contributed to the *Central. für Gynakologie*, No. 12, 1880. It gives an account of eight cases in succession in which, by Hegar or by Kaltenbach, the uterus had been removed on account of fibroid tumors, all of which were successful, and all had been treated since August, 1879. The author objects to Pean's extra-peritoneal method as hitherto practised, on two grounds: first, that it is usually not, or at least not completely, extra-peritoneal. Only when the cervix is very mobile or very long does it permit of being so far drawn out as that the ligatures lie in front of the abdominal wall. In other cases they lie between the edges of the abdominal incision, and even in the peritoneal cavity, beneath the serous membrane. The second objection to the Pean method is the usually rapid onset of decomposition in the stump, and the great difficulty of keeping it antiseptic. To avoid the first difficulty Hegar stitches the peritoneum close to the stump below the ligatured point, so that the stump comes to project free from the bottom of a short conical or funnel-shaped cavity, the sides of which are formed by the thickness of the abdominal wall, and communication with the peritoneal cavity is completely shut off. To avoid sepsis in the stump, Hegar, partly by experiment on animals, partly by observation of operation cases, has arrived at the result that the stump can only be kept securely aseptic by dryness and keeping away of every kind of moisture. This end is effected in these opera-

tions, first, by the most careful arrest of bleeding in the abdominal incision; secondly, the stump itself, on its cut surface and on its peripheral aspect, is cauterized as deeply as possible with Paquelin's cautery. Then the edge of the abdominal incision on the lateral walls of the funnel-shaped cavity is painted over with a 10 per cent. solution of chloride of zinc, the excess of solution being carefully dried up, immediately after the painting, with small balls of cotton-wool. The bottom of the funnel is avoided in this process, and a weaker solution employed for it. Small rolls of absorbent wool, which have been steeped in a weak chloride of zinc solution (1–2 per cent.) and then dried, are pushed between the stump and the edge of the wound, and the cavity thus carefully filled. The rest of the dressing must be so arranged that one may examine the stump and surroundings at any time without disturbing the dressing. If the rolls of cotton-wool are moistened with blood or wound fluid, we may be sure that decomposition is sitting in rapidly. The unpleasantness in this treatment is the sloughing off of the edges of the abdominal wound and its surroundings. This slough begins to come away from the 6th to the 7th day. Hegar and Kaltenbach have not seen any bad results from it. After the 5th or 6th day the chief dangers are over. These operators do not now employ Pean's ligature, but the elastic ligatures recommended by Kleeberg in Odessa for fibroma operations. A short account of the eight cases is then given.—*Edinburgh Med. Journal*, Aug. 1880.

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Diastases in the Bones of the Lower Extremities of the Fœtus, produced by the Accoucheur.

In the *Edinburgh Medical Journal*, for June, Professor SIMPSON has an article on this subject. In a case of turning for placenta prævia, the child being dead, he had an opportunity of making a dissection of one leg in which the only external appearances of injury were a slight abrasion over the internal malleolus and an undue mobility of the ankle-joint, as if some of the ligaments had been torn through. "Yet at three different points fractures were found on dissection. They were all fractures of the kind known to surgeons as 'diastases'—the shaft of the bone, that is to say, had become detached from the epiphyses. The seats of the diastases in the right leg are, 1st, the upper end of the femur below the trochanters; 2nd, the lower end of the tibia; and 3d, the lower end of the fibula. There has also been some separation of the epiphysis of the lower end of the femur, but the upper ends of the tibia and fibula are quite firm. In the left leg the epiphysis of the lower end of the tibia is loosened, but the epiphyses at both ends of the femur are firm." Dr. Simpson was led to make this examination from reflecting on a case which he has already published of a similar kind, except that the child was born alive. The left leg was found on the day after birth to be greatly swollen, with abrasions of the skin above the malleoli, and the limb hung stiffly from the pelvis. At that time he believed there was no injury to the bone or joint, but some laceration of the muscles and vessels. He is now inclined to think there may have been some fracture similar to that referred to. He would recommend in every case of turning, an examination of the limbs of the child, especially if there had been considerable traction exercised. If there be complete separation between apophysis and diaphysis, and the periosteum lacerated in the entire circumference of the bone, the hiatus will be easily traceable and crepitation may be felt. When there is simply loosening of the epiphysis the diagnosis will be more difficult as crepitation may not be perceptible. In the latter case nothing will be required beyond seeing that the limb is kept as much as possible at rest, but should the periosteum be lacerated, it will be necessary to bandage the limb to keep the separated portions of bone in apposition.—*Glasgow Med. Journal*, Sept. 1880.

MEDICAL NEWS.

Colour-Blindness as a Practical Question.

Colour-blindness is no longer merely a scientific curiosity, but has become one of the practical questions of the day. Its discussion, instead of being confined to philosophic treatises and occasional articles in medical journals, has been taken up by medical societies, legislatures, corporations, and even political meetings, and the daily newspapers frequently give it a place in their columns.

Whatever may be thought of the merits of this question, or of what should be done in reference to it, there can be no doubt that its importance is at last recognized, and that it is receiving that thorough "ventilation" which is pretty sure to be followed by favourable action when the rights and interests of the public are concerned. This is due to the determined and persistent efforts of a few earnest men, such as Holmgren, Donders, Favre, and others abroad, and Dr. Jeffries in this country. The most rigid conservative or the most persistent obstructive will hardly now claim that some means should not be taken to protect the travelling public against the dangers that may arise from colour-blindness in those to whose care their lives are entrusted.

Everybody knows that the use of red and green signals is universal, both on land and sea, and that, particularly at night, the prompt and correct interpretation of these signals is the only security against collisions and other accidents; and it is now an established fact—established by observations at least as extensive, reliable, and positive as those upon which most of the facts by which we regulate the conduct of our lives are based—that about four per cent. of our male population are colour-blind; and colour-blindness is also a frequent symptom of various diseases of the optic nerve. It is too plain for argument that we have here to deal with a real danger, and not with a mere whim of scientific enthusiasts. Another danger, scarcely less important, is that arising from deficient acuteness of vision resulting from errors of refraction or diseases of the eyes.

It is of interest to know what is being done with this practical question. Government regulations have been established in nearly all European countries. The English government has not yet passed any law upon the subject, but some of the most important roads have instituted examinations on their own account. The army, navy, and marine hospital departments of our own government have each taken some action in the matter, though no uniform and definite standard of requirements has been established. An order of the Secretary of War requires that all accepted recruits shall be examined

for colour-blindness by Holmgren's tests, and any defect observed noted on the descriptive list of the soldier. Such defect is not considered a cause for rejection, but disqualifies for service in the signal corps. An order of Surgeon-General Wales directs a similar examination, by medical officers of ships and stations, of all persons in the navy. In the merchant marine the government enforces the examination of pilots only. The Treasury Department has ordered that all persons applying for an original license, or for a renewal of license, as pilots on steam vessels shall be tested for colour-blindness. Every applicant for original license must present a certificate from a surgeon of the marine-hospital service, but pilots employed at points remote from marine hospital stations may be accepted on the certificate of any respectable physician of their neighbourhood. As this neighbourhood is likely to be a fisherman's village, the requirement is not an exacting one. Visual examination is not compulsory with any other class of seamen. Marine-hospital surgeons are required to examine, free of expense, any seamen who may be presented to them; but their labours have not been materially increased in consequence.

It will be noticed that, while our government has taken some important steps in the right direction, there is still a want of concurrence between the different departments, which have acted separately and partially, without any common plan or any fixed standard of requirements as to the necessary degree of visual acuteness and colour perception. The necessity of concurrent action in a matter of so much importance is evident; not only between the different departments of our own government, but between different governments, as the seas are the common highways of all maritime nations, and their safe navigation is a question of international interest. A petition in favour of such action, signed by Dr. Jeffries, and a number of ophthalmic surgeons and prominent scientific men, was presented to the last Congress. It was referred to the Naval Committee, who reported in favour of the appointment of officers of the diplomatic and consular service, and of the navy as commissioners, "to attend and represent the United States in any international congress held to consider and act upon said subject." A bill to that effect will be brought up at the next session of Congress.

At the instance of Mr. Bowman, the following resolutions have just been passed by the ophthalmological section of the British Medical Association, and forwarded to the British government and to the Milan Congress:—

"1st. That it is most desirable to establish international standard tests of visual acuteness and colour perception by means of an international commission, to which the several governments should be invited to send delegates.

"2d. That in all countries, persons upon whom may devolve the charge of life, by sea and land, where signalling is employed, with or without the use of colours, should be required to submit themselves to such standard tests of their sight, both before being admitted to their several services and also at stated subsequent intervals.

"3d. That an important part of the duty of such an international commission should be to devise some common system of signalling, especially for sea-going ships and for all coastwise; and that the standard tests should be decided on with special reference to such common system of signalling."

So much for the prospect of national and international action. The only one of our State governments that has taken any steps in the matter is Connecticut. She is the pioneer, and on her ground this new battle of civilization is just now being fought. An act was passed last March directing the State Board of Health "to prepare rules and regulations for the examination and re-examination of railroad employés in regard to colour-blindness and visual power;" and to recommend annually to the Governor, for appointment, two or more medical experts to make these examinations. Every railroad in the State is required to cause its employés to be examined before the 1st of October, 1880, and is rendered liable to a fine of not less than $200 or more than $1000 for employing any one after that date who does not hold a certificate of freedom from colour-blindness and possession of normal vision.

The Board of Health, in whose hands the matter is thus placed, have adopted substantially the standard of requirements agreed upon by the International Medical Congress at Amsterdam in 1879. Railroad employés are divided into two classes. Engineers, firemen, and brakemen form the first, and all others are included in the second. A certificate for the first class requires—1st. Healthy eyes and eyelids, without habitual congestion or inflammation. 2d. Unobstructed visual field. 3d. Normal visual acuteness. 4th. Freedom from colour-blindness. 5th. Entire absence of cataract or other progressive disease of the eyes.

For the second class—1st. Healthy eyes and eyelids, without habitual congestion or inflammation. 2d. Unobstructed visual field. 3d. Visual acuteness at least equal to three-fifths without glasses, and normal with glasses in one eye; and at least one-half in the other with glasses. 4th. Freedom from colour-blindness in one eye; colour perception at least equal to three-fourths in the other eye.

These requirements may be modified by the board in the case of old employés who have held their positions for five or more years. There is no provision for re-examinations at stated intervals, but re-examination is required—1st. After any disease of the eyes. 2d. After injuries affecting the head or eyes. 3d. After any disease or trouble of the brain, and after long-continued illness, as typhoid fever. 4th. After mistakes or acts which call in question the visual powers; also whenever directed by the Board of Health.

There is certainly nothing monstrous or unreasonable in these provisions. Few of us would care to trust our lives on a stormy night to an engineer who could not distinguish *promptly* between red and green; and fair average sight is all that is required by the tests for acuteness of vision. But colour-blind trainmen are not blind to their own interests, and before

half a dozen cases had been detected they stirred up their friends to hold mass meetings, circulate petitions, and employ counsel. Unfortunately, a Presidential election is near at hand, and among these 3000 Connecticut railroad men there is "a possible" 120 of colour-blind voters, to say nothing of those whose vision may be defective from other causes. Therefore "the two *great* political parties" have rushed to the rescue, and, vying with each other in their patriotic efforts to oppose the law, have raised a "tempest in a teapot," which would be funny if it were not rather degrading. They clamor for "practical tests by practical men." This means the waving of flags and lanterns, which has been proved to be *practically* almost worthless. It has been shown, over and over again, that a colour-blind person may make very intelligent and, under *favourable circumstances*, generally correct guesses at the colour of these flags and lanterns, particularly if his eye has been trained to observing them for years. He does this by means of the difference in the *intensity* of light, his perception of which has been unusually developed in consequence of the absence of the colour sense—just as the hearing of the blind becomes more acute. Such guessing, however, is not a safe guide where life or death depends upon the correctness of the guess, especially as the intensity of a light varies with atmospheric and other conditions, and its perception is affected by the varying states of the eyes and of the general health. This fact seems to have been had in view by the committee of protesting engineers when they stipulated that the tests should be made "under fair conditions of atmosphere." This makes things easy for the engineers, but is hard on people who have to travel of foggy or sleety nights.

The "pressure" seems to have been too much for the Connecticut Board of Health, who have halted their doctors in the midst of their work and directed them to make no more examinations until further orders. Policy would seem to dictate that these orders should not be given until after the election, when sober second thought may give a chance for honest conviction or harmless indifference.

At all events, Dr. Jeffries has succeeded in getting the thin end of his wedge pretty well in place; and, while he is perseveringly hammering away at it, he should have the aid of all who can help him drive it home.

Proceedings of the Fifth Annual Meeting of the American Gynæcological Society, Cincinnati, Sept. 1st, 2d, and 3d, 1880.

(Specially reported for the MEDICAL NEWS AND ABSTRACT.)

The fifth annual session of the American Gynæcological Society was held at Cincinnati, September 1st, 2d, and 3d, 1880. The Society was called to order by its President, Dr. J. Marion Sims, and upon the Secretary, Dr. Chadwick, calling the roll, about twenty (forty per cent.) of its Fellows were found to be present.

Dr. THAD. A. REAMY, of Cincinnati, a resident Fellow, delivered a brief and eloquent address of welcome, in which he congratulated the Society upon the

high position in medical literature already occupied by the published Transactions of the body, and expressed the belief that they would continue to improve with each successive meeting.

The Proper Field for Battey's Operation was the subject of the first paper on the programme. Dr. BATTEY, the originator of the operation, did not present his paper in full, but gave the principal points which he intended to make in that publication. Among the different classes of cases chosen for it he mentioned cases of menstro-mania or ovarian mania, in which there could be no question as to its advisability. The mind in many of these cases is dethroned by reason of violent perturbations dependent upon stoppage of menstruation; the same accidents sometimes follow while menstruation is going on, but its functions are deranged, and its process accompanied by very severe pain. After removal of the ovaries in such cases profound changes in their structure are found, which are incurable by any internal administration of medicines. Cases of ovarian epilepsy form another rather numerous class of cases indicating the operation. The author here hoped that operators would exercise great caution in distinguishing cases of uterine from those of ovarian epilepsy. Cases of absence of the uterus, with more or less irregular ovulation, would often produce in the system such violent nervousness and local congestion, unrelieved by nature's assistance in the menstrual discharge, that he would not hesitate to remove the ovaries. He gave an example of another class of cases in which there was complete occlusion of the metro-vaginal canal, in which removal of the ovaries was very gratifying. Another class, which he acknowledged to be a very inexact and unscientific classification, includes cases of pernicious amenorrhœa in which all other plans of treatment fail. Some cases of interstitial fibroid tumours of the uterus, not amenable to the ordinary resources of our art, constantly subject the patient to the danger of death by exhaustive hemorrhages. The climacteric follows the removal of the ovaries, and the tumour gradually diminishes in size. Such has been the experience of Hegar, Lawson Tait, and a number of physicians of our own country. In certain incurable flexions of the uterus the extirpation of the ovary is justifiable. In conclusion, Dr. Battey strongly advised the removal of the ovary in every case in which an obstetrician is compelled to resort to the Cæsarean section on account of a contracted or deformed pelvis. He believed it criminal to subject a woman, upon whom abdominal section was once performed, to a repetition of a similar danger.

Anterior Displacement of the Ovary.—Dr. GEO. J. ENGELMANN read an account of two cases of anterior displacement of the ovary simulating inguinal hernia. This is a rare form of malposition, much rarer, indeed, than the lateral displacement referred to by Dr. P. F. Mundé in the last volume of the Society's Transactions. One of the two cases referred to occurred in a young woman of twenty-four, and had existed for seven years. She dated the beginning of her trouble from a fall. When seen by the author, after having been cared for by a number of physicians, mental delusion was showing itself in the form of melancholia. The second case was a woman of forty-six, whose nervous system was hopelessly disturbed. At no time except during the menstrual discharge did the lump appear. In the one case the ovary was removed. It was not enlarged. The patient recovered without a bad symptom. The removal of this one ovary brought on the menopause. She menstruated very slightly twice after its extirpation, but never after. Her melancholia disappeared, and she recovered completely. In his second case, instead of producing the menopause artificially, it was left to nature because of her age. He did not believe that a melancholia which had existed twenty-six years would be relieved by either menopause or the removal of the ovaries.

In the discussion which followed the reading of these two papers, Dr. FORDYCE BARKER stated that he had met with but three cases of anterior displacement of the ovary. He could not believe it possible for such an accident to be caused by a fall. He was inclined to consider the displacement congenital, but thought the fall might have aggravated the congestion and thus induced the nervous symptoms. His own treatment had been palliative, and his best results had been attained by the administration of hyoscyamia during the menstrual periods.

Dr. BYFORD stated that while he believed Battey's operation would be found a very useful measure in some cases, we would often be disappointed in its results. In some remarks upon the influence of removal of the ovaries upon interstitial fibroids of the uterus he referred to one case in which the fundus extended two inches above the umbilicus, and in which both ovaries were removed. As nearly as the speaker could recollect, this case had been reported by Dr. Trenholme, of Canada, as cured by the operation. That patient had been under the speaker's care for the past year, and her condition is about as miserable as it is possible to be. Of course, there is now no menstruation, but irregular congestions and hemorrhages occur in consequence of the least exercise or excitement. These sometimes reduce her almost to the point of death. The tumour now reaches fully as far above the umbilicus as it was described before the operation. Her condition now, therefore, although somewhat changed, is not improved.

Dr. SIMS remarked that Battey's operation is now quite frequently performed by German surgeons; in England it has advanced quite rapidly within the past twelve months. Lawson Tait has been seized with a mania for its performance, having had twenty-eight cases in less than one year; he reports excellent results, but the accounts of these cases were, in the speaker's estimation, meagre and unsatisfactory. Sims had himself recently operated upon four cases. Two were now doing well; one died from the effects of bromide of ethyl, and the fourth was only partially benefited. He predicted a grand future for the operation after we have better learned how to discriminate the proper cases.

In concluding the discussion Dr. BATTEY said that in every instance in which he had removed both ovaries, the menopause had been established. If either be partially left, menstruation will continue to some extent. During menstruation we expect an increased flow of blood to the reproductive organs, hence an increased growth of any tumour present. By stopping this periodical congestion, we hope for and will often succeed in producing a gradual atrophy of the tumour. He expressed great fears that the operation might fall into disrepute through too great license in the selection of cases.

Ovariotomy Complicated with Pregnancy.—Dr. WILSON read a paper in which he discussed the question of what should be done with a large ovarian tumour existing with pregnancy. He objected to tapping on account of the necessity for its frequent repetition, and because each tapping is followed by new and strong adhesions to the adjacent organs. His statistics showed twenty-four recoveries out of twenty-nine operations undertaken under antiseptics, independent of any reference to the existence of pregnancy.

Dr. DUNLAP was of the opinion that ovariotomy would be likely to induce labour, and labour occurring immediately after such an operation, would be likely to result fatally. He advised, therefore, that an abortion be induced, and that the ovariotomy be postponed until after recovery from the abortion.

Dr. CHADWICK advocated the policy of non-interference whenever the ovarian tumour could be pushed and kept above the brim of the pelvis. He considered the dangers of non-interference much magnified, and cited three cases in which this let-alone policy had resulted very favourably.

Dr. BYFORD had been in the habit of frequently tapping the cyst in these

patients, but said that the favourable statistics presented by Dr. Wilson went very far toward influencing him in favour of the removal of the ovarian tumour during pregnancy. He was utterly opposed to the mischievous practice of abortion in these cases. He mentioned one case in which an ovarian tumour of considerable size existed throughout two pregnancies without rupture and was afterwards successfully operated upon.

Dr. SIMS, in the course of some remarks which agreed in the main with those of Dr. Wilson, referred to one case in which rupture of an ovarian cyst occurred during labour and the woman recovered. The same accident, followed by the same happy result, happened also in her next confinement. He felt satisfied that when the tumour becomes as large as a fœtal head, the better plan, in the majority of cases, will be to remove it.

Uterine Massage as a Means of Treating Certain Forms of Enlargement.—Dr. A. REEVES JACKSON'S paper on this subject opened with an account of the causes producing these enlargements; he spoke of the failure of most of the means hitherto employed in reducing these enlargements, and of the good results obtained from massage. Three kinds of massage are applicable in uterine diseases; abdominal, abdomino-vaginal, and abdomino-rectal. The first of these is the most satisfactory, but is applicable only when the fundus uteri extends above the pubes. The last variety is difficult of application, quite painful, and therefore of limited applicability.

Dr. REAMY had had no experience in the employment of uterine massage, but several points regarding it were far from clear to his mind. As used by Weir Mitchell, massage is employed to increase the strength and size of the muscular tissue in the limbs and elsewhere, not to reduce it. It may possibly be that massage, as employed by Dr. Jackson, promotes contraction of the muscular fibres in the engorged uterus. The length of time required, and the difficulty of obtaining the assistance of a competent person to carry it out, would, the speaker thought, be serious obstacles to the general adoption of this plan of treatment. Previous to its use it is extremely important that a correct diagnosis be made, and that pelvic cellulitis be excluded.

Dr. CAMPBELL believed that the enfeebled circulation unattended with inflammatory conditions, for which Weir Mitchell used massage, would in an organ such as the uterus, leave the organ engorged with blood, therefore enlarged. The primal causes of these two states were the same. In each case, then, massage would stimulate the circulation and restore the natural condition and size of the organ.

Cataleptic Convulsions Cured by Trachelorraphy.—Dr. R. S. SUTTON'S contribution on this subject consisted in the narration of a case of lacerated cervix, in which the slightest contact with the point of laceration induced convulsions. Emmet's operation was performed and a perfect cure was the result.

Extirpation of an Encephaloid Kidney.—Dr. WM. H. BYFORD reported the removal of an encephaloid kidney weighing four and a half pounds. The principal difficulty in the case was in the establishment of a diagnosis.

In the discussion which followed this report, Dr. CHADWICK mentioned, as a point of possible value in diagnosis, the displacement forward of the colon in any growth involving the kidney.

Secondary Puerperal Hemorrhage.—Dr. PARVIN'S paper on this subject was a full discussion of the causes, symptoms, and treatment of this accident. He included under this head hemorrhage occurring from six hours to thirty days after parturition. Amongst the most potent of its causes, he included mental emotions, especially grief, and gave several illustrations.

The discussion unfortunately was not confined to *secondary*, but was largely devoted to immediate puerperal hemorrhage.

Dr. CAMPBELL, in some extended remarks, expressed the utmost reliance in iodine. When called to a serious case, he injects a solution composed of one part tincture of iodine to four parts of water. This, he claims, leaves no clot, produces no pain, and effects instantaneous contraction.

Dr. WILSON followed with some interesting remarks in which he advocated the use of the hand as a curette. The interior of the uterus should be freely scraped by the finger-nails.

Dr. BARKER expressed surprise that the author had not referred to malaria as a cause of these hemorrhages. He believed it to be a very potent cause. Iodine had not in his hands proved so successful as with a previous speaker. Hot water injections would often check an otherwise uncontrollable bleeding. He had often used iron but never with fatal results. On account of the character of the clot produced by it he would not again employ it except as a last resort.

Value of Quinia in Gynecic and Obstetric Practice.—Dr. H. F. CAMPBELL, in a paper on this subject, devoted himself to a refutation of the charge so frequently made against quinia, that its continued administration is liable to induce abortion. In his country—a very malarious one—it often becomes necessary to administer this agent in very considerable doses throughout the entire period of gestation, and the speaker has yet to learn of the first case in which it has exerted any of the ill effects attributed to it; indeed, he believed that its timely administration saved many a fœtus.

Dr. FORDYCE BARKER said that the influence of quinia in quickening and rendering more efficient labour pains, was what doubtless led to the incorrect belief in its harmfulness during gestation. He said that no healthy uterus will throw off a healthy fœtus. He had no doubt that the malarial poison tends to produce abortion, and agreed with the essayist in the belief that quinia often prevented it.

Drs. REEVE and PARVIN agreed perfectly with the statements made by the author of the paper regarding the innocuousness of quinia during pregnancy.

Dr. REAMY, of Cincinnati, said that quinia is not, in the true sense of the word, an oxytocic, yet in certain conditions and in a certain class of subjects—the leuco-phlegmatic—it will promote delivery; the circumstances under which it will have this effect are during the latter part of the first stage when the pains are frequent and inefficient, and the dilatation slow. Under such conditions, three ten-grain doses of quinia given at intervals of one-half hour, will slow the heart, reduce the fever, if present, cool the skin, lessen the frequency, and greatly increase the power of uterine contractions, rapidly promoting dilatation, and lessening the suffering of the patient. In cases not malarial he had frequently arrested a threatened abortion by moderate doses of ergot. In proof of this statement he gave a full comparison of the physiological effects of ergot and of such large doses of quinia as would be required under these circumstances. Those who will carefully select their cases will realize the result; but those who employ it as a promoter of parturient pains in all cases of inertia will be disappointed.

The Instinctive (or Natural) and Physiological Position of Woman in Labour.—Dr. GEO. J. ENGELMANN, of St. Louis, read only a portion of his paper, which is an exhaustive discussion of the subject of the position assumed by woman in labour. The essay showed very extensive research, and the author illustrated his descriptions of the peculiar postures of women, civilized and uncivilized, in ancient and modern times, by the presentation of a large number of well-executed drawings. As the result of his study of this subject, the author stated that the semi-recumbent position is the one most generally assumed during the most

agonizing pains, and this is the one he would accordingly advocate. His conclusions were, therefore, that in the early stages the woman should be allowed to follow her own instincts as to position, and even in the later stages the same may usually be safely done with very slight restrictions. The semi-recumbent position appears to afford the greatest relief with the best effect, as it permits a free play of all the parts.

Dr. J. C. REEVE believed that whatever position a woman might assume early in labour, when the severe pains came on she would, if left to her own inclinations, assume the position on the back, with head and shoulders slightly elevated. This is the best position, with one exception—that on her knees—which in civilized life the woman is not likely to often assume. This, however, would bring the axis of the fœtus and uterus still more nearly in line with the pelvic axis.

Dr. CAMPBELL cited a number of instances which convinced him that the natural position of woman in labour was the squatting position.

Three Fatal Cases of Rupture of the Uterus with Laparotomy.—Dr. W. T. HOWARD, of Baltimore, read a report of three cases in which this accident had occurred, and in which he had performed laparotomy. These three cases all proved fatal. In the future he would prefer to extirpate the uterus, as by this means a smaller surface would be left exposed to bleed and ulcerate. Statistics prove that extirpation of the uterus in such cases is not so frequently followed by death as is the simpler operation of Cæsarean section and removal of the child.

Drs. WILSON and PARVIN agreed that Dr. Howard had indicated the correct rule of action in these cases. It might not always be necessary to operate if the rent be low down, involving the vagina; but whenever it occurs high up, the removal of the uterus is certainly the only proper procedure.

The Hot Rectal Douche.—Dr. J. R. CHADWICK, of Boston, stated at the outset that the chief purpose for which this plan of treatment had been heretofore employed had been for the removal of impacted fecal masses. He cited a number of cases in which its field of usefulness had in his opinion been extended. Several of these were cases of diarrhœa dependent upon disease of the rectum and large intestine. A few applications of the hot rectal douche cured what a long-continued course of internal medication had wholly failed to influence. Previous to calling attention to the next class of cases in which it is useful, he demonstrated, by means of a number of Braune's plates, the very limited extent of peritoneal surface which it would be possible to influence by vaginal injections, as compared with the exceedingly large extent open to the influence of hot water introduced into the bowel. By this means the body of the uterus and the ovaries, as well as all the pelvic tissues, could have heat applied to them with only the intervention of the thin intestinal wall. Several cases were mentioned of burning pain in the ovarian region, and of other conditions following pelvic inflammation, so relieved. It is applicable in all cases except acute inflammatory diseases, and is, in the opinion of the author, incalculably superior to all other methods of applying warmth.

Dr. CAMPBELL, in the course of some remarks in agreement with the essayist, expressed the belief that the hot water passed up into the small intestine and formed a sort of cushion about the pelvic organs. Being interrogated by Dr. Reamy as to its passing the ileo-cæcal valve, he said he had no doubt of the possibility of such an occurrence.

Dr. REAMY suggested that the water would lose its high temperature before it reached a very high point of the intestines. He contended that it was impossible, with the power exerted by the douche or ordinary syringe, to force water past the ileo-cæcal valve. The fact that all the water so injected does not pass

off is no proof that it is carried into the small intestine, because a large amount of it is absorbed and enters the general system. It can never pass the valve in a mass.

Dr. CHADWICK, in concluding the discussion, said, in reply to a question of Dr. Howard, that he had in two or three instances heard patients complain of hæmorrhoids; but these patients had probably suffered from them before. The use of the douche, by preventing the accumulation of feces, would obviate all danger of hæmorrhoids. He generally suspended the use of the douche during menstruation, not knowing what might be its effects. He failed to agree with Dr. Reamy that the same results could be obtained from poultices applied externally, because, as before shown, the application could never be so closely made. He also differed with Dr. Reamy regarding retrostalsis. He said that about one year ago he performed an ovariotomy after freely purging his patient. During five days subsequent to the operation he permitted no food to be given by the mouth, but supported her by enemata of beef-tea. Yet on the fifth day the patient vomited beef-tea. He believed that this beef-tea had passed the ileo-cæcal valve and had been carried upward by retrostalsis.

Ulceration of the Cervix Uteri.—Dr. THAD. A. REAMY, of Cincinnati, read his paper on the above subject only by abstract. The paper is founded on an examination of eight thousand women supposed to be suffering from uterine disease. By the ulcerative process and by ulcer the author means what is expressed by Paget and Billroth, and cited the following definitions:—

Ulcerative process usually the result of detachment of dead portions or molecules of inflamed tissue. . . . Substance removed, not absorbed, but ejected. . . . An ulcer usually begins by slough or detachment of dead tissue by removing layers of living tissue that surround it. (Paget.)

An ulcer is formed when by the above process the vascular and proper tissue (submucosa) is removed. (Paget.)

An ulcer is a wounded surface which shows no tendency to heal. (Billroth.)

Excluding syphilitic and cancerous ulceration, out of the total 8000 women examined, there were found but 19 cases of true ulceration.

A large number suffered from abrasions and erosions—so-called ulcers.

The widely-extended disagreement between physicians as to the prevalence of ulceration is attributable, not to ignorance of a gross character, but to a difference of opinion as to where abrasion or erosion stops and ulceration commences.

Close of the Session.—The hour for adjournment having arrived, several papers were read by title only. Dr. Sims then introduced his successor, the President elect, Dr. Byford, of Chicago, after which the society adjourned, to meet in New York on the third Wednesday in September, 1881.

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Change in School Terms.—The College of Physicians and Surgeons and Bellevue Hospital Medical College, in response to the unmistakable demand for improvement in the curriculum, have lengthened their winter course, so that, at the former school, it begins on the 1st of October and ends about the last of April, and at Bellevue it began September 15th, and will end about the middle of March. The preliminary fall course in both schools is now abolished.

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The Sanitary Protection Association of Newport, R. I.—This Society was founded in 1878, after the model of the Edinburgh Association established by Mr. Jenkin, and has for its objects (1) to provide its members, at moderate cost, with such advice and supervision as shall insure the proper sanitary condition of their own dwellings; (2) to enable members to procure practical advice, on moderate terms, as to the best means of remedying defects in houses of the poorer class in

which they are interested; and (3) to aid in improving the sanitary condition of the city. The Association has just completed its second year, and is steadily increasing its good work and gaining ground in public estimation. During the past twelvemonth eighteen inspections were made, and in all, with but a single exception, very grave defects were discovered. The sum of one hundred dollars has been placed at the disposal of the Association, for the purpose of awarding prizes to the owners of dwellings, who shall, for the space of one year, keep their premises in the most perfect order and sanitary condition. Dr. H. R. Storer is the Corresponding Secretary, and Colonel George E. Waring, Jr., the Consulting Engineer of the Society.

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British Medical Association.—The forty-eighth annual meeting of the British Medical Association was held at Cambridge, August 10, 11, 12, and 13, under the Presidency of Prof. Humphrey. The Address in Medicine was delivered by Dr. Bradbury, that in Surgery by Mr. Timothy Holmes, and that in Physiology by Dr. Michael Foster. There were about eight hundred members present, and the meeting was considered in all respects a brilliant success. The subject of holding the annual meeting in 1881, was remitted to the consideration of the Council in consequence of the proposed International Medical Congress in August of next year.

At the annual dinner of the Association the President proposed the toast of "Our Guests" and dwelt upon the kindly relations existing between the profession of Great Britain and the profession on the Continent and in America, and coupled the toast with the names of Prof. Brown-Séquard and Prof. Gross. Prof. Gross in appropriate words responded to the toast. He warmly urged the cultivation of social intercourse between the two great nations represented by the association and by himself; and he assured his hearers of the sympathy of the profession in America.

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Honorary Degrees Conferred at Cambridge.— In accordance with the announcement, the honorary degree of Doctor of Laws was conferred on the 11th of August, by the University of Cambridge, upon Dr. C. E. Brown-Séquard, of Paris; Dr. Donders, of Utrecht; Dr. S. D. Gross, of Philadelphia; Sir Wm. Jenner, Bart., Sir Wm. Gull, Bart., Sir George Burrows, Bart., Mr. Wm. Bowman, the Rev. S. Haughton, M.D., Mr. Joseph Lister, Dr. D. C. O'Connor, Mr. J. Simon, and Dr. Andrew Wood.

The Public Orator, Mr. Sandys, introduced each candidate to the Vice-Chancellor in a short Latin speech. Dr. Gross was introduced as follows:—

"Trans fluctus Atlanticos, trans Oceanum non iam ut antea 'dissociabilem;' patriæ nostræ ad portus nuper advectus est vir venerabilis quem inter fratres nostros Transatlanticos scientiæ Chirurgicæ quasi alterum Nestorem nominare ausim. Ergo libenter quasi fraterno amore hodie salutamus, civitatis bene ominati nominis civem, Chirurgiæ Professorem Philadelphiensem, Samuelem Gross."

The *Lancet*, in commenting on the honors of Cambridge says: "Brown-Séquard, Gross, and Donders could not be more gratified with the rare honour of receiving the honorary degree of LL.D. Cantabriensis, than the profession of Britain will be gratified to know that they have received it."

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International Medical Congress, London, 1881.—From the official circular of the Congress, just received, we learn, in addition to the announcement already made (see *Medical News* for September, page 572), that the days of the meeting will extend from Wednesday the 3d, to Tuesday the 9th of August, both

days included, and that a Reception of Welcome will take place on the evening of August 2.

The Executive Committee inform their "colleagues abroad that ladies will be invited to the social and ceremonial meetings of the Congress, but will not be admitted to its business meetings."

Dr. Risdon Bennett, President of the Royal College of Physicians of London, has been appointed Chairman of the Executive Committee, and Mr. Prescott Hewitt, Chairman of the Reception Committee.

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International Sanitary Conference.—The President has issued a call for an International Sanitary Conference to meet at Washington, D. C., on the first day of January, 1881, to which the several powers having jurisdiction of ports likely to be infected with yellow fever or cholera, have been invited to send delegates, properly authorized, "for the purpose of securing the adoption by the powers in question of an international system of notification as to the actual sanitary condition of ports and places under the jurisdiction of such powers, and of vessels sailing therefrom.

The specific propositions which will be submitted to the conference will include the following:—

A. The establishment of a reliable and satisfactory international system of notification as to the existence of contagious and infectious diseases, more especially cholera and yellow fever.

B. The establishment of a uniform and satisfactory system of bills of health, the statements in which shall be trustworthy as to the sanitary condition of the port of departure and as to the condition of the vessel at the time of sailing.

The discussion of these points would involve, among others, the following questions:—

I. Who should be the certifying officer or authority as to the sanitary condition of ports and places and of vessels?

II. How can the certifying authority obtain trustworthy information as to the actual sanitary condition of ports and places and as to the presence of contagious and infectious diseases?

III. When yellow fever or cholera exists at or in the vicinity of a port or place, what examination should be made of a vessel sailing therefrom to secure a trustworthy knowledge of her sanitary condition?

IV. To what extent, and under what conditions, should a clean bill of health be considered as affording satisfactory evidence that the vessel is free from danger of conveying infectious disease?

V. In what way can trustworthy information be obtained from ports or places in countries which have imperfect or unsafe quarantine and sanitary regulations, and which may be unwilling or unable to adhere to the proposed international system?

VI. Whether a schedule of graduated penalties could be fixed to be exacted from vessels for various offences arising under the proposed international system.

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Meeting of the Medical Society of Virginia.—This Society will meet in Danville on October 19th, at half-past seven P. M.

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Kentucky State Medical Society's Transactions.—At the last meeting of this Society, it was resolved to discontinue the publication of a volume of Transactions, simply publishing the minutes in pamphlet form. The papers read before the Society may be published by their authors in any regular medical journal. It is

proposed to appropriate the money heretofore spent in publishing the Transactions towards the creation of a prize essay fund.

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The Case of the late Miss Adelaide Neilson.—As the reports which have reached this country of the sudden illness and death of this distinguished *artiste* seemed to envelop the case in considerable mystery the following account of her illness and death, which appears in the *Lancet* (Aug. 28th), by Dr. W. E. JOHNSTON, of Paris, who has been her physician for the last five years, will be read with melancholy interest by her many admirers on this side of the Atlantic.

Dr. Johnston says "the disease from which she suffered principally was gastralgia—one of the forms of dyspepsia attended with neuralgia of the stomach, a form extremely fantastic in its coming and going, and in her case quite as dependent on moral causes as on errors of diet. The last fatal attack in the Bois de Boulogne was evidently one of her usual attacks of gastralgia, which might have been relieved then, as it often had been before, by a free use of morphine. The unfortunate lady sent her maid for me at seven o'clock, but to my great regret I was absent that evening on a visit to my family in the country, and did not hear of her illness till I heard of her death. At three o'clock in the morning, twelve hours from the commencement of the attack, during a most violent recurrence of the pain, she suddenly ceased to complain, went into a state of syncope, and died in the syncope. The post-mortem examination made the next day by Dr. Brouardel, Professor of Legal Medicine at the Medical School of Paris, and now one of the first authorities in Europe in legal medicine, disclosed the extraordinary fact, one of the rarest in the history of medicine, that in her writhing she had ruptured a varicose vein in the left Fallopian tube, and had died from internal hemorrhage. Two quarts and a half of blood were found in the peritoneal cavity, and the ruptured vein presented an orifice of from four to five millimetres in diameter."

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Literary Notes.—The Government Printing Office has just issued the first volume of the Index Catalogue of the Library of the Surgeon-General's Office. The attention of the readers of the *News* has been, from time to time, called to the magnitude of this work, which is practically an author and subject index of medical literature to date of publication. The first of the projected ten volumes contains 888 quarto pages, extends from A to Berlinski, and justifies the high anticipations that have been formed of its value. The work has been compiled under the supervision of Surgeon John S. Billings, to whose intelligent zeal and indomitable energy the Government is indebted for this noble contribution which it has made to the cause of medical science and of the healing art.

The September number of the *Popular Science Monthly* contains an interesting biographical sketch, with portrait, of Dr. Joseph Leidy, of the University of Pennsylvania, which will be read with the interest which always attaches to the history of one whose scientific labours have rendered his name known wherever natural history is cultivated.

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OBITUARY RECORD.—Died, at Vienna, on the 5th of August, aged 64, FERDINAND R. V. HEBRA.

Prof. Hebra was born at Brünn in 1816, and pursued his medical studies at Vienna where he graduated in 1841. He then became assistant to Skoda, and was induced by his illustrious teacher to devote himself to the study of dermatology. In 1842 he delivered his first private course of lectures. Shortly afterward, through the influence of Skoda, a section in the hospital was founded for skin diseases, at the head of which Hebra was placed. In 1848 Hebra was made Extraordinary Professor and his lectures were largely attended by students from

all parts of the world. His scientific labours were numerous, the principal of them are thus described by Prof. Neumann, "although the existence of the itch mite was made known centuries ago, yet few practitioners were in a position to find and demontrate it prior to 1844, when Hebra exhibited the galleries formed by it in the penis, the buttocks, the umbilicus, and the bend of the elbow, explaining at the same time that the efflorescence produced was of a traumatic nature. Heretofore the view had prevailed that the papules, vesicles, and pustules were due to a diseased condition of the blood. Taught by his abundant experience, Hebra opposed the employment of stimulant substances to the skin, having arrived at the conviction that the relief they afforded was only temporary, while in scrofulous or cachectic subjects sometimes great mischief to the skin followed their use. The expectant treatment, which Hebra had studied under his teacher Skoda, he carried into the practice of skin diseases, and as a consequence of this principle the great bulk of the stores of medicinal applications were banished forever. In the treatment and etiological foundation of eczema, Hebra took a most prominent part, fixing its diagnosis upon new points of view, and establishing its treatment on a more certain basis. He proved the impossibility of the retrocession of diseases of the skin, and showed that the symptoms from which the idea of retrocession had arisen—the disappearance of the eruption on the occurrence of typhus or pneumonia, the paling of erysipelas, erythema, or scarlatina during the agony of death, and the absence of redness in the corpse—was really the result of anæmia of the skin. Hebra employed a classification of skin diseases, which, already designed by Rokitansky in its essential features, was found well adapted to clinical requirements. In 1842 he first re-introduced the banished mercurial treatment; not that he ever became an excessive mercurialist, his principle being to try again all remedies without prejudice. He employed as well the various other anti-syphilitic means, iodine, non-specific treatment, syphilization and vaccination of the syphilitic."

During ten years, Hebra edited the *Zeitschrift der Gesselschaft der Aerzte in Wein*, and in this he published several papers, as, for example, on the most important Diseases of the Hairy Scalp, his Classification of Skin Diseases, on Herpes Tonsurans and Norwegian Scabies, etc. Among his great works are his magnificent "Atlas der Hautkrankheiten," published by the Vienna Academy of Sciences, and his "Handbuch der specielle Pathologie und Therapie der Hautkrankheiten," translated by the New Sydenham Society.

Prof. Hebra's fame was recognized throughout the civilized world, and by his death the Vienna Medical School has sustained its greatest loss since the retirement of Rokitansky.

—— At Somerville, Mass., on August 29th, CHARLES THOMAS JACKSON, M.D., aged 75 years.

Dr. Jackson was born at Plymouth, June 21, 1805; he studied under Drs. James Jackson and Walter Channing, and graduated in medicine at Harvard University in 1829. After a course of study abroad, he settled in Boston in 1833, and devoted much of his time to chemistry, mineralogy, and geology. He is best known to the medical profession as the claimant to the discovery of surgical anæsthesia, and he received from the French Academy of Sciences the Monthyon prize of 2500 francs for the discovery of etherization.

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To Readers and Correspondents.—The editor will be happy to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession. Local papers containing reports or news items should be marked.

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